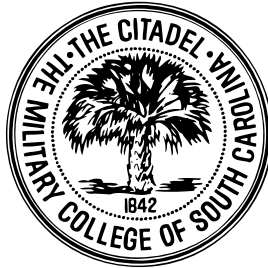


# **THE CITADEL**

**THE MILITARY COLLEGE OF SOUTH CAROLINA  
CHARLESTON, S.C.**



**FOUNDED 1842**

**CATALOG ISSUE  
2018-2019**

## Leadership

Since 1842, The Citadel has molded individuals into leaders. As we enter a new millennium, The Citadel reaffirms its belief that the whole person is one who is worthy of the trust of others. The following qualities of leadership will be the guiding principles for The Citadel as we develop a new generation of leaders to serve their families, their communities, their professions, and their country.

*A Leader . . .*

*believes in an optimistic vision for the future.*

*motivates others to achieve.*

*demonstrates loyalty.*

*respects the rights of others.*

*sets a good example.*

*pursues excellence in all endeavors.*

*treats others with concern and civility.*

*demonstrates the courage to act responsibly.*

*possesses uncompromising integrity.*

*is devoted to duty and honor.*

These principles will guide our behavior and serve as our moral compass in all that we say and do.



**General Glenn M. Walters, USMC  
President**



**Brigadier General Mark A. Bebensee**  
**Interim Provost and Dean of the College**

## Table of Contents

Academic Calendar .....	6
History of The Citadel.....	7
General Information.....	13
Requirements for Admission.....	17
Academic Policies.....	25
Student Support Programs, Services, and Activities.....	52
Military Policies.....	66
ROTC Programs.....	74
Expenses .....	84
Financial Aid and Scholarships.....	89
Department of Intercollegiate Athletics .....	102
The Citadel Honors Program .....	104
The Undergraduate Curriculum .....	109
Courses of Study.....	161
Tommy and Victoria Baker School of Business .....	242
Zucker Family School of Education .....	256
School of Engineering.....	266
Department of Civil and Environmental Engineering .....	267
Department of Electrical and Computer Engineering.....	286
Department of Mechanical Engineering .....	298
School of Humanities and Social Sciences .....	311
Department of Criminal Justice .....	312
Department of English, Fine Arts, and Communications .....	322
Department of History .....	335
Department of Intelligence and Security Studies.....	353
Department of Modern Languages, Literatures and Cultures.....	361
Department of Political Science.....	378
Department of Psychology.....	392
Swain Family School of Science and Mathematics.....	397
Department of Biology .....	398
Department of Chemistry.....	412
Department of Health and Human Performance.....	425
Department of Mathematics and Computer Science .....	443
Swain Department of Nursing .....	459
Department of Physics .....	464
Department of Leadership Studies.....	475
Department of Aerospace Studies.....	477
Department of Military Science.....	482
Department of Naval Science .....	487
Organization	
Board of Visitors .....	493
Executive Staff .....	494
Senior Staff.....	494
Administrative and Activity Directors .....	496
Auxiliary Enterprises .....	498
Faculty.....	499
Emeriti Faculty.....	523
Index .....	526

## The Citadel Academic Calendar 2018-2019

2018		2019	
Aug. 11	Class of 2022 Reports	Jan. 6	Winter Break Ends Corps of Cadets Return
Aug. 19	Corps of Cadets Upperclass Students Report	Jan. 9	Classes Begin for the Corps of Cadets/Day Students
Aug. 21	Freshman Convocation	Jan. 15	Last Day to Drop/Add
Aug. 22	Classes Begin for the Corps of Cadets/Day Students	Jan. 21	Martin Luther King Jr. Day (No Classes)
Aug. 28	Last Day to Drop/Add	Mar. 8	Spring Break Begins after Last Class
Sept. 3	Labor Day (Classes Held)	Mar. 17	Spring Break Ends Corps of Cadets Return
Oct. 12-14	Parents' Weekend	Mar. 18	All Classes Resume
Oct. 17	Leadership Development Day No Classes	Mar. 26	Last Day to Withdraw with a Grade of "W"
Oct. 31	Last Day to Withdraw with a Grade of "W"	Mar. 27-29	Leadership Symposium
Nov. 6	Election Day (No Classes Held)	Mar. 30	Corps Day/Recognition Day
Nov. 9-10	Homecoming Weekend	Apr. 24	Exams Begin for Corps of Cadets/Day Students
Nov. 16	Thanksgiving Break Begins after Last Class	Apr. 30	Exams End for Corps of Cadets/Day Students
Nov. 25	Thanksgiving Break Ends	May 4	Commencement
Nov. 26	All Classes Resume	May 6	Maymester and Summer I Evening Classes Begin
Dec. 7	Exams Begin for Corps of Cadets/Day Students	May 24	Maymester Ends
Dec. 13	Exams End for Corps of Cadets/Day Students Winter Break Begins	May 27	Memorial Day (No Classes)
		May 28	Summer I Day Classes Begin
		Jun. 18	Summer I Evening Classes End
		Jun. 24	Summer II Evening Classes Begin
		Jun. 25	Summer I Day Classes End
		Jul. 4	Independence Day (No Classes)
		Jul. 5	Summer II Day Classes Begin
		Aug. 1	Summer II Day Classes End
		Aug. 6	Summer II Evening Classes End

## A Brief History of The Citadel

### Early Years

The Citadel has a long history of preparing its graduates to serve their country, both in civil and military pursuits. The idea of "citizen-soldiers," trained to take up arms for their country in time of conflict but prepared to serve with integrity and discipline in all walks of life, has been central to its mission from its early years.

In December of 1822, following the discovery of a slave revolt planned by Denmark Vesey, the South Carolina state legislature passed "An Act to Establish a Competent Force as a Municipal Guard for the Protection of the City of Charleston and Vicinity." The original Citadel, intended to serve as an arsenal and guardhouse, was constructed near the site of Charleston's Revolutionary War fortifications. Located just north of Calhoun Street, it stood in a neighborhood of free blacks, working-class whites, and slaves, where it provided a visible reminder of city authority. It was initially intended to house a municipal guard, but was instead guarded first by United States troops and then, during and after the Nullification Crisis in the early 1830s, by local troops.

In 1833, the legislature voted to consolidate arms and munitions at two locations, the Citadel in Charleston and the Arsenal in Columbia. In 1842, they voted to replace the local guard with students. Half of the students would pay tuition; the other half would be "beneficiary cadets," young men selected from among the poorer residents of each county, whose tuition would be paid by the state. Importantly, all cadets took the same classes and performed the same duties, while uniforms erased social distinctions and rank was based on merit alone. The inclusion of cadets from all counties helped unify the state politically, while the spaces available to beneficiary cadets made The Citadel one of the only places in the state where the sons of poorer citizens could gain a college education.

In their curriculum and military training the schools were modeled on the United States Military Academy at West Point, Norwich (University), and the Virginia Military Institute.

The first classes were taught in 1843. Two years later the Citadel and Arsenal were combined, so that fourth-class cadets (freshmen) attended classes at the Arsenal, then transferred to the Citadel for their remaining three years. From the beginning, The Citadel was known for its high academic standards. Cadets were required to take courses in history, literature, logic, French, moral

philosophy, and elocution, a liberal arts education that would prepare them to serve as leaders in public life. Many entered careers in law, medicine, and education. Others were called to religious service, including Bishop Ellison Capers, class of 1857, and William Porcher DuBose, class of 1855, one of the most influential theologians in the Episcopal tradition. Cadets also studied the practical sciences, including chemistry, physics, civil and military engineering, mathematics, astronomy, geology, and surveying. Among the school's early alumni, E. L. Heriot, Class of 1847, conducted the first railroad survey west and south of the Rio Grande River, while T. J. Arnold, Class of 1852, designed the harbor and wharves of San Francisco and Oakland, California.

Students also studied infantry and artillery tactics, and helped train the state's Palmetto Regiment for service in the Mexican-American War.

### **The Civil War and Reconstruction**

When South Carolina seceded from the Union in December 1860, federal troops were moved from Fort Moultrie to Fort Sumter. To protect the entrance to Charleston Harbor, the Governor of South Carolina ordered a fortification to be constructed on Morris Island. On January 9, 1861, Citadel cadets who were stationed on Morris Island fired on a U.S. steamer, the *Star of the West*, which had been sent to re-supply Fort Sumter.

On January 28, 1861, the Corps of Cadets were incorporated into the military organization of the state as The Battalion of State Cadets. The cadets took part in eight engagements in defense of Charleston and South Carolina. In recognition of their service, the Office of the South Carolina Adjutant General authorized The Citadel to carry the following battle and campaign streamers:

Star of the West, January 9, 1861  
 Wappoo Cut, November 1861  
 James Island, June 1862  
 Charleston and Vicinity, July to October 1863  
 James Island, June 1864  
 Tulifinny, December 1864  
 James Island, December 1864 to February 1865  
 Williamston, May 1865

The college remained in operation throughout much of the war, and cadets were eligible for commissions in the state's military upon graduation. Of the 224 graduates living at the time of the Civil War, 209 entered the Confederate service. Four graduates achieved the rank of Brigadier General: Johnson Hagood, Ellison Capers, Evander Law and Micah Jenkins. Citadel graduates were involved in the major battles of the war, including Fort Sumter, First

Manassas, Shiloh, Vicksburg, Antietam, Chancellorsville, Gettysburg, Atlanta, and Petersburg.

The Arsenal Academy burned during the fall of Columbia in 1865 and never reopened. The Citadel was occupied by federal troops when Union forces entered Charleston in early 1865. After the end of Reconstruction Citadel alumni, who had organized the Association of Graduates in 1852, pressured the legislature to reopen the school. Although many legislators questioned the need for a state-supported military college in the absence of munitions to guard, the support of alumni and the Washington Light Infantry, as well as the school's renewed commitment to educating beneficiary cadets, ultimately saved the institution. It reopened in 1882.

### **Military Service**

Citadel alumni have served in all major military actions in which the United States has been involved since the late nineteenth century. Seventeen graduates served with volunteer regiments and five alumni served with the Regular Army in the Spanish-American War in 1898. The National Defense Act of 1916 began the formation of Reserve Officers Training Corps in U.S. colleges and offered the opportunity for recent graduates to enter the Regular Army. 315 Citadel graduates served in World War I; of the class of 1917, all 33 entered military service.

During World War II, The Citadel had the distinction of having the highest percentage of its students enter the military service of any college, with the exception of the service academies. Of 2,976 living graduates in 1946, 2,927 had served their country. Before the end of the war, 279 Citadel men had given their lives. Citadel graduates participated in all major campaigns of World War II, from Pearl Harbor through the major engagements in the European, North African, and Pacific Theaters, and at sea. A number of Citadel graduates fought in the Philippines and endured the Bataan Death March. The Citadel also provided wartime training to over 10,000 men under a contract with the War Department.

In the Korean War, roughly 1500 alumni were on active duty, and 31 graduates were killed in action. Sixty-five Citadel men gave their lives in Vietnam, and several graduates were prisoners of war in North Vietnam. Graduates also displayed their valor in the liberation of Grenada and peacekeeping operations in Beirut, Lebanon, and in the Balkans. During the Persian Gulf War 22 cadets served with Reserve and National Guard units; alumni served in both the Active and Reserve components of the Armed Forces. Citadel alumni, veteran students, and current cadets assigned to activated Reserve and National Guard units have served in both Afghanistan and Iraq. At the time of this printing 18 Citadel graduates have given their lives for their country in the ongoing War on Terror.

### **Citadel Expansion**

The Corps of Cadets has grown from 43 students enrolled at the Arsenal and Citadel in 1843 to 2,174 in 2017. With 39 percent of the Corps now coming from out of state, and a student body that represents 27 different countries, the college draws students from a wide range of backgrounds and experiences.

The Citadel has attracted international students since the 1920s, when Chinese students entered as cadets, sponsored by the Boxer Indemnity Fund. Most went on to serve in the Chinese Army, several achieving the rank of Brigadier General. The Chinese cadets were followed by groups of students from Thailand in the 1960s, Iran in the 1970s, and Jordan in the 1970s and 1980s. Connections forged during international students' college years could grow into lifelong bridges: Charles G. Huie later returned to the U.S. to conduct research as an engineer with the U.S. Army; Andrew Chinn became a business owner in the U.S.

The first African-American cadet, Charles D. Foster, entered the Citadel in 1966, three years after South Carolina began integrating its public colleges and universities. He graduated in 1970, followed by Joseph Shine in 1971; six African-American students graduated in 1973. African-American students were often targeted with racial slurs and threats of racial violence. At the same time, the unique culture of the Corps of Cadets, and particularly the shared experience of the fourth-class system, helped promote integration across racial lines. Today, black and African-American students make up 8.9% of the Corps of Cadets, and 22.9% of the Corps are minorities.

Women began attending The Citadel in 1949 as part of the summer school program, and were admitted to evening classes in 1966. In 1995, Shannon Faulkner, through court orders, became the first woman to matriculate into the Corps of Cadets. She resigned a few days later, but the next year, following a United States Supreme Court ruling on a similar case involving the Virginia Military Institute, the Citadel Board of Visitors voted to revoke the male-only admissions policy of the Corps of Cadets.

In August of 1996, four females matriculated with the class of 2000. Two of these resigned amid allegations of hazing and harassment. The lawsuits and negative publicity associated with this incident marked a difficult time for the reputation and image of The Citadel and its alumni. Nancy Mace received her degree three years later, becoming the first female graduate of the Corps of Cadets. She was followed by Petra Lovetinska, who became the first female cadet to receive a commission in the U.S. Armed Forces. Today, women make up 7.6% of the Corps of Cadets. Women and minorities are an integral part of the Corps, many occupying key positions in the cadet chain-of-command, varsity athletics, and campus organizations. They also form an important part of The Citadel's strong alumni network and have served on the Citadel Board of Visitors.

Veteran students, too, have become important contributors to the Citadel's academic life. Veterans were first admitted as civilian students under the GI Bill at the end of World War II; the current veterans program was established in 2007 and 68 veterans are currently enrolled as day students.

In 1968, the Citadel began granting graduate degrees through an evening program. The program grew until 1994, when the Citadel Board of Visitors approved the foundation of the College of Graduate and Professional Studies (now known as the Citadel Graduate College, or CGC). A coeducational institution from its conception, the CGC is now a mainstay of the Citadel's academic environment, offering 26 graduate degree programs and 24 graduate certificate programs.

The Citadel's growth has led to the need for an ever-larger physical campus. By the end of World War I, the school had outgrown its location on Marion Square and the City of Charleston donated land, previously the site of the South Carolina Interstate and West Indian Exposition, for a new campus. The current campus opened in 1922 with Padgett-Thomas Barracks, an infirmary, two wings of Bond Hall, and other auxiliary buildings. State- and federally funded building projects during the Depression included Summerall Chapel and the distinctive Works Progress Administration faculty houses. The college continues to expand as it serves a growing student body.

### **Leading the Community and the World**

In addition to a long history of military service, the school's citizen-soldier ideal prepares graduates for service and leadership in civil capacities. Alumni have gone on to pursue distinguished careers in areas including law, politics, medicine, engineering, education, business, and law enforcement. Ernest F. Hollings, Class of 1942, served as South Carolina Governor and United States Senator. Joseph P. Riley, Jr., Class of 1964, served ten consecutive terms as mayor of Charleston, overseeing a number of ambitious development projects. Alvah H. Chapman, Class of 1942, headed the influential Knight Ridder newspaper chain, while author Pat Conroy graduated in the Class of 1967. The Citadel and its graduates have also been active in world affairs. In addition to serving as Governor of South Carolina, John C. West, Class of 1942, served as U.S. Ambassador to Saudi Arabia, while Langhorne A. Motley, Class of 1960, served as U.S. Ambassador to Brazil and as Assistant Secretary of State for Latin American Affairs.

Today's Citadel builds on this distinguished legacy, preparing students to lead with integrity in an increasingly interconnected world. Through a growing study abroad program, students develop language skills and gain experience working with a range of cultures and countries. The current honor system, re-instituted in 1955, enshrines the integrity of students and alumni as a cornerstone of The Citadel's values. During their academic careers and beyond, Citadel men

and women put into practice the core values and principles of the institution.

#### SUPERINTENDENTS /PRESIDENTS OF THE CITADEL

Captain William F. Graham, USA, 1843-1844

Major Richard W. Colcock, USA, 1844-1852

Major Francis W. Capers, CSA, 1852-1859

Major Peter F. Stevens, CSA, 1859-1861

Major James B. White, CSA, 1861-1865

Colonel John P. Thomas, CSA, Class of 1851, 1882-1885

Brigadier General George D. Johnson, CSA, 1885-1890

Colonel Asbury Coward, CSA, Class of 1854, 1890-1908

Colonel Oliver J. Bond, SCM, Class of 1886, 1908-1931

General Charles P. Summerall, USA, Ret. 1931-1953

General Mark W. Clark, USA, Ret. 1954-1965

General Hugh P. Harris, USA, Ret. 1965-1970

Major General James W. Duckett, SCM, Class of 1932, 1970-1974

Lieutenant General George M. Seignious II, USA, Ret., Class of 1942, 1974-1979

Vice Admiral James B. Stockdale, USN, Ret. 1979-1980

Major General James A. Grimsley, Jr., USA, Ret., Class of 1942, 1980-1989

Lieutenant General Claudius E. Watts III, USAF, Ret., Class of 1958, 1989-1996

Major General John S. Grinalds, USMC, Ret., 1997-2005

Lieutenant General John W. Rosa, USAF, Ret., Class of 1973, 2006-2018

General Glenn M. Walters, USMC, Ret., Class of 1979, 2018-Present

## General Information

### Accreditation

The Citadel is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award baccalaureate, masters, and specialist in education degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of The Citadel.

Normal inquiries about the institution, such as admission requirements, financial aid, educational programs, etc., should be addressed directly to The Citadel and not to the Commission's office. The Commission should be contacted only if there is evidence that appears to support a significant non-compliance with a requirement or standard.

Civil Engineering and Electrical Engineering Programs are accredited by the Engineering Accreditation Commission (EAC) of ABET; web address is <http://www.abet.org>.

The undergraduate program in Business and the program leading to the Master of Business Administration are accredited by the Association to Advance Collegiate Schools of Business (AACSB), 777 South Harbour Island Boulevard, Suite 750, Tampa, FL 33602-5730. Telephone: 813-769-6500; Fax: 813-769-6559. The web address is [www.aacsb.edu](http://www.aacsb.edu).

Programs for the preparation of secondary teachers at the bachelor's level, for the preparation of secondary and special education teachers at the master's level, for the preparation of guidance counselors at the master's and specialist degree levels, and for the preparation of school superintendents at the specialist degree level are accredited by the Council for Accreditation of Educator Preparation (CAEP), 1140 19th Street, NW, Suite 400, Washington, DC 20036. Telephone: 202-223-0077. The web address is [www.caepnet.org](http://www.caepnet.org). The Dean of the School of Education serves as the Director of Teacher Education.

The B.S. Chemistry Program is accredited by the American Chemical Society, 1155 Sixteenth Street, NW, Washington, DC 20036. Telephone: 800-227-5558. The web address is [www.acs.org](http://www.acs.org).

The Bachelor of Science in Computer Science is accredited by the Computing Accreditation Commission (CAC) of ABET, 415 North Charles Street, Baltimore, MD 21202. Telephone: 410-347-7700; web address is [www.abet.org](http://www.abet.org).

The Citadel's School Psychology Program has been granted full approval by the National Association of School Psychologists (NASP), 4340 East West Highway, Suite 402, Bethesda, MD 20814. Telephone: 301-657-0270; FAX: 301-657-0275. The web address is [www.nasponline.org](http://www.nasponline.org). The Clinical Counseling program is accredited by the Masters in Psychology and Counseling Accreditation Council, 595. New Loudon Rd., #265, Latham, NY 12110. Telephone: 518-785-1980. The web address is <http://mpcaccreditation.org/>.

### **Statement of Vision**

Achieving excellence in the education and development of principled leaders.

### **Core Values**

#### **Honor**

First and foremost, honor includes adherence to the Honor Code of The Citadel. A cadet “will not lie, cheat or steal, nor tolerate those who do.” The commitment to honor extends beyond the gates of The Citadel and is a life-long obligation to moral and ethical behavior. In addition, honor includes integrity, “doing the right thing when no one is watching.” Finally, honorable behavior includes exercising the moral courage to “do the right thing when everyone is watching.” The Honor Code is the foundation of our academic enterprise.

#### **Duty**

First and foremost, duty means to accept and accomplish the responsibilities assigned to me. At The Citadel, my primary duty is to perform academically and then to perform as a member of the Corps of Cadets and the campus community. I accept the consequences associated with my performance and actions. Once I have held myself accountable for my actions, then I will hold others accountable for their actions. Finally, duty means that others can depend on me to complete my assignments and to assist them with their assignments. Duty is also a call to serve others before self.

#### **Respect**

First and foremost, respect means to treat other people with dignity and worth --the way you want others to treat you. Respect for others eliminates any form of prejudice, discrimination, or harassment (including but not limited to rank, position, age, race, color, gender, sexual orientation, national origin, religion, physical attributes, etc.). In addition, respect for others means to respect the positions of those in authority which include faculty, staff, administrators, active duty personnel, and the leadership of the Corps of Cadets. Finally, respect includes a healthy respect for one’s self.

### **Mission**

As a higher education institution, The Citadel’s mission is to educate and develop our students to become principled leaders in all walks of life by instilling the core values of The Citadel in a disciplined and intellectually challenging environment. A unique feature of this environment for the South Carolina Corps of Cadets is the sense of camaraderie produced through teamwork and service to others while following a military lifestyle.

The Citadel strives to produce graduates who have insight into issues, ideas, and values that are of importance to society. It is equally important that Citadel graduates are capable of both critical and creative thinking, have effective communication skills, can apply abstract concepts to concrete situations, and possess the methodological skills needed to gather and analyze information.

Throughout its history, The Citadel’s primary purpose has been to educate undergraduates as members of the South Carolina Corps of Cadets and to prepare them for post-graduate positions of leadership through academic programs of recognized excellence supported by the best features of a military environment. The cadet lifestyle provides a structured environment that supports growth and development of each student’s intellect, discipline, physical fitness, and moral and ethical values. The four pillars which define The Citadel experience for cadets consist of these four developmental dimensions.

A complementary purpose of The Citadel, realized through The Citadel Graduate College, is to provide the citizens of the Lowcountry and the State of South Carolina opportunities for professional development by offering a broad range of educational programs of recognized excellence at both the graduate and undergraduate levels. These programs are designed to accommodate the needs of non-traditional students seeking traditional and demanding academic challenges.

**Institutional Characteristics.** The Citadel is a coeducational, comprehensive, public, four-year institution whose primary undergraduate student body consists of more than 2,300 members of the Corps of Cadets, all of whom reside on campus. The primary service area for these students is regional, with approximately half of each freshman class coming from South Carolina. The Citadel, however, does draw undergraduate students from all parts of the United States and many foreign countries. The college offers a wide range of baccalaureate degree programs (Bachelor of Arts, Bachelor of Science, Bachelor of Science in Business Administration, Bachelor of Science in Civil Engineering, Bachelor of Science in Electrical Engineering, Bachelor of Science in Mechanical Engineering, and Bachelor of Science in Nursing) in the humanities, social and natural sciences, business administration, engineering, and education. These academic programs prepare graduates of the Corps of Cadets for a variety of careers; about half of these graduates enter business and the professions, a third or more enter the military and government service, and the remainder go directly into graduate and professional study. Many graduates choose to pursue professional or graduate degrees later in their careers.

Through its undergraduate and graduate programs, The Citadel Graduate College serves a degree-seeking population of approximately 1,100. The primary service area is the South Carolina Lowcountry. The Citadel Graduate College offers eight baccalaureate degree programs (Bachelor of Arts in Criminal Justice, Bachelor of Arts in Political Science, Bachelor of Science in Business Administration, Bachelor of Science in Civil Engineering, Bachelor of Science in Electrical Engineering, Bachelor of Science in Mechanical Engineering, and Bachelor of Science in Nursing, Bachelor of Science in Social Studies Education), seven graduate degree programs (Master of Arts, Master of Science, Master of Arts in Education, Master of Arts in Teaching, Master of Education, Master of Business Administration, and Specialist in Education), and eight certification programs. Meeting the needs of the South Carolina Lowcountry in terms of instruction, public service, and research, including such initiatives as cooperative programs with other educational institutions, is an important part of The Citadel’s mission.



Together, the Corps of Cadets and The Citadel Graduate College enroll approximately 3,400 students, about two-thirds of whom come from South Carolina.

In its education programs, The Citadel acknowledges and endorses the teacher-scholar ideal, recognizing that the excellence of all of its academic programs is dependent upon the quality of its faculty. This ideal is pursued through teaching and lecturing, researching, writing, publishing, and public service. The Citadel's faculty also address audiences beyond the college by sharing their knowledge with other scholars and with the public.

#### **Four-Year Principled Leader Development Model**

4th class	Prepare
3rd class	Engage
2nd class	Serve
1st class	Lead

#### **The Purpose of The Citadel's Military Environment**

The Citadel seeks to provide the best qualities of a military and disciplined environment to support the growth and development of character, fitness, and moral and ethical principles, thereby preparing its students to meet the requirements of citizens and especially of leaders. From the first year, with the Fourth-Class System, through the senior year, the military environment requires additional duties and responsibilities not normally found on a college campus.

The military environment at The Citadel also attempts to draw out and cultivate such values as truth, honor, integrity, and courage. Qualities of proper behavior and etiquette are stressed, and excellence in military bearing and appearance is taught. Whether in military or civilian life, the testimony of the value of this institution in service to the nation, state, and local communities is prominent.

#### **Official Communications**

Each Citadel student is assigned a Citadel e-mail address. Official communications are often sent electronically, and these communications will be sent to the cadet's Citadel e-mail address. It is the responsibility of each student to check his/her Citadel e-mail regularly to ensure receipt of all official communications.

## **Requirements for Admission**

The Citadel gives consideration to all applicants who meet the personal, physical, and educational requirements for admission to the Corps of Cadets. The Citadel seeks to enroll well-rounded, mature students whose motivation and educational achievements indicate that they are prepared to do college level work with a reasonable probability of success. Therefore, each admission portfolio is reviewed individually and must include at least the following:

a. *High School Record* (courses, grades, class standing). The high school record provides insight into an applicant's motivation, study habits, and scope of interest. Particular attention is given to grades earned in English, mathematics, science, history, and foreign languages.

b. *College Entrance Examination Board Test Scores*. Consideration is given to an applicant's test scores on the College Board's SAT or the American College Testing Program's Assessment Exam (ACT). Although these test scores represent only one factor in the determination of an applicant's acceptability, they tend to indicate the applicant's educational development with respect to contemporaries; therefore, the applicant's scores provide a reasonable evaluation of actual preparedness and potential to do college level work.

c. The Citadel seeks to determine acceptability through a thorough evaluation of each applicant's character, maturity, motivation, readiness for college, amenability to a regimented lifestyle, emotional stability, and potential to contribute to cadet life. Where any one of these factors is in question, the College may obtain additional information by means of interviews with the applicant and/or the applicant's parents or other persons who know the candidate. If it is deemed necessary, The Citadel may request that the applicant present a written report on goals in life, reasons for choosing The Citadel, or reasons for choosing a particular major field of study.

d. The Citadel reserves the right to cancel any academic acceptance or reservation if the recipient is found to be physically disqualified or if a subsequent academic or conduct record is found unsatisfactory. Entrance requirements must be fully met before the date of matriculation. No one will be admitted on probation.

#### **Initial Acceptance and Withdrawals**

New cadets are admitted to the Corps of Cadets only in the first semester of the school year but may commence their academic work in the preceding summer. However, courses taken before formal matriculation will not be counted toward the 24 credit hours required to be completed in the first academic year as a continuation requirement. Mid-year transfers from the federal service academies will be considered on an individual basis.

If a cadet finds it necessary to withdraw from The Citadel during the college year or does not wish to return to The Citadel in August following any college year, a written request for an honorable discharge must be sent to the Registrar.

### Admission Procedure

Formal application for admission must be made by the applicant. The application for admission may be found online at [www.citadel.edu/admissions/](http://www.citadel.edu/admissions/) apply. The Citadel admits new students into the South Carolina Corps of Cadets only in the fall semester of each year.

A nonrefundable application fee of \$40 must accompany each application. Applications for admission may be submitted after the candidate's junior year in high school. All students are encouraged to apply no later than the fall semester of the prospective cadet's senior year in high school. In addition, the applicant should make early arrangements to take the SAT or ACT test and have these test scores sent to The Citadel. Prospective cadets are responsible for having the official high school transcript sent directly to The Citadel's Office of Admissions.

The Citadel will advise the applicant of subsequent procedural actions as they are necessary.

A deposit of \$300 is required of all new cadets accepted for enrollment. This reservation fee is not refundable to those students who cancel their reservations after May 1.

Each applicant must undergo a thorough medical examination. Final admission is contingent upon the results of this test. Only The Citadel's forms, which are provided on-line by the Office of Admissions, may be used to report these results. The medical examination form shows the immunizations required by The Citadel.

### Legal Presence and Residency

The State of South Carolina requires all state colleges and universities to verify each student's legal presence in the United States. Prior to matriculation, each matriculant will be required to submit a photocopy of their birth certificate or valid U.S. passport. (A copy of the birth certificate must be provided as part of the preregistration information necessary for enrollment in the ROTC classes.)

### Personal Requirements

Applicants to the South Carolina Corps of Cadets must meet the U.S. Army standard for height and weight (Army Reg 40-501) and must be physically qualified as determined by the Citadel Surgeon. An initial applicant who fails to meet the Citadel height/weight standard can gain admission by passing the Citadel body-fat standard (included on the Admissions website under Physical Fitness) using the U.S. Army technique for measuring body fat. The height/weight standard for admissions is NOT the same as that required of a cadet. After matriculation, all freshmen fall under the Corps Physical Effectiveness Program and its standards as outlined in *The White Book*.

**Should an accident, injury, or serious illness in any way change the physical status of the applicant after acceptance but prior to arrival on**

**campus, the Citadel Surgeon must be informed immediately.** Any physical impairment could result in cancellation or postponement of admission. In addition, an applicant must meet the following personal requirements:

- a. Applicants must be at least 17 and less than 23 years of age on the day of matriculation at The Citadel. Exceptions to this policy are made only under extremely extenuating circumstances and with the permission of the Provost.
- b. Applicants may not be married. (If a cadet marries, he/she will be discharged immediately.)
- c. Applicants may not have childcare responsibilities for any minor child related to him/her by blood or marriage. (If a cadet assumes childcare responsibilities for any minor child related to him/her by blood or marriage, he/she will be discharged immediately.)
- d. Applicants must not have a record of conviction of a criminal offense showing poor moral character.
- e. Applicants are expected to be prepared physically for the rigors of cadet life. The Citadel Physical Fitness Test (CPFT) will be administered for record early in the fall semester. Individuals who do not meet standards will be required to participate in remedial physical training.

### High School Course Requirements

All applicants for admission to The Citadel must be graduates of accredited high schools or must have satisfactorily completed the General Education Development (GED) examination. By this, the basic requirements for admission to the College comply with standards prescribed by the South Carolina Commission for Higher Education (CHE).

The following secondary school subjects are required:

Area	Units	
English	4	At least two units must have strong grammar and composition components, at least one must be in English literature, and at least one must be in American literature. Completion of College Preparatory English I, II, III, and IV will meet this criterion.
Mathematics	4	These include Algebra I (for which Applied Mathematics I and II may count together as a substitute, if a student successfully completes Algebra II), Algebra II, and Geometry. A fourth higher-level mathematics course should be selected from among Algebra III/trigonometry, precalculus, calculus, statistics, discrete mathematics, or a capstone mathematics course and should be taken during the senior year. Applicants who plan to major in mathematics, computer

Laboratory Science	3	science, chemistry, physics, or engineering and who have not completed at least one-half unit of trigonometry will be required to complete MATH 119 with a grade of C or higher prior to enrolling in calculus. Two units must be taken in two different fields of the physical or life sciences and selected from among <b>biology, chemistry, or physics</b> . The third unit may be from the same field as one of the first two units ( <b>biology, chemistry, or physics</b> ) or from <b>any laboratory science</b> for which <b>biology</b> and/or <b>chemistry</b> is a <b>prerequisite</b> . Courses in earth science, general physical science, or introductory or general environmental science for which biology and/or chemistry is <b>not</b> a prerequisite will not meet this requirement. It is strongly recommended that students take physical science (taught as a laboratory science) as a <b>prerequisite</b> to the three required units of laboratory science outlined in this section. <b>It is also strongly recommended that students desiring to pursue careers in science, mathematics, engineering or technology take one course in all three fields.</b>
Foreign Language	2	Two units of the <u>same</u> foreign language. (American Sign Language will not fulfill this requirement.)
Social Science	3	One unit of U.S. History is required. Half units each of economics and government are strongly recommended.
Fine Arts	1	One unit in Appreciation of, History of, or Performance in one of the fine arts.
Elective	1	One unit must be taken as an elective. A college preparatory course in <b>Computer Science (i.e., one involving significant programming content, not simply keyboarding)</b> is <b>strongly recommended for this elective</b> . Other acceptable electives include college preparatory courses in <b>English; fine arts; foreign languages; social science; humanities; laboratory science(excluding earth science, general physical science, general environmental sci-</b>

ence, or other introductory science courses for which biology and/or chemistry is not a prerequisite); or **mathematics above the level of Algebra II.**

#### Physical Education/ROTC 1

One unit of physical education or ROTC must be taken.

Prior to entering The Citadel, each applicant should take steps to address any weaknesses in preparation in English or mathematics. The Citadel offers courses in these areas each summer.

#### The Citadel's Policy on Testing for Illegal Drugs

The Citadel has a clear and unwavering policy of zero tolerance for drugs. Whether on campus or off, the possession, solicitation, distribution, sale, or use of hallucinogenic, narcotic, or other controlled drugs or substances, or any drug paraphernalia, (except in accordance with a legal prescription for such substance, drug, or paraphernalia for the student possessing or using it), will result in expulsion. This policy does not permit cadets to tolerate these actions by fellow cadets. In support of this policy, The Citadel reserves the right to test members of the Corps of Cadets periodically for the presence of illegal drugs and other controlled substances. Agreeing to participate in this program of testing for drugs is a condition of final admission to The Citadel. Refusal to participate in this testing may lead to expulsion from the college.

#### Policy on Placement

The Citadel requires four semesters of language study or its equivalent in the same language for all majors except engineering and education. Students who wish to continue a language studied in high school or elsewhere must take a placement test in that language. The placement test score determines the level at which the student will continue his/her study of the language.

Credit for by-passed courses will be awarded when the higher level course has been completed at The Citadel with the grade of "C" or higher, transferred in from an accredited institution, or completed through an approved "testing out process."

If the grade of "F" is earned in a higher level course, no by-pass credit is awarded and all by-passed courses must be completed. If the grade of "D" is earned in the higher level course, that course may be repeated only once in an attempt to earn by-pass credits. If the grade of "C" or higher is not earned after one repeat, no by-pass credit will be awarded and all by-passed courses must be completed.

#### Entrance Examinations

All applicants for admission to The Citadel are required to take the College Board's SAT or the American College Testing (ACT) Assessment Tests.

If an applicant lists The Citadel on either the SAT or ACT examination, the test scores will be sent to The Citadel approximately 30 days after the tests are

taken. An applicant should complete the required entrance examinations early in the student's senior year in high school.

Students from a foreign country whose native language is not English must receive satisfactory scores on the Test of English as a Foreign Language (TOEFL). Students who score less than 550 on the TOEFL paper exam or 79 on the computer exam are generally not eligible for academic acceptance. The TOEFL is prepared and administered by the Educational Testing Service of the College Entrance Examination Board and must be taken before March 1 of the spring preceding admission.

In order to apply for these tests, the applicant may apply online. Test dates, registration information and deadlines may be found at the links below:

SAT: <http://sat.collegeboard.org/register>

TOEFL: <http://www.ets.org/toefl/ibt/register/>

ACT: <http://www.actstudent.org/regist/>

### **The Citadel Non-Cadet Veteran Day Program**

An eligible non-cadet veteran is defined to be an individual who provides evidence through a DD 214 of honorable discharge from one of the Armed Services indicating a minimum of 90 consecutive days of full-time federal active service, other than active duty for training.

#### **Academic Requirements:**

Veteran applicants must meet the academic standards outlined under the "High School Course Requirements" and "Entrance Examinations" sections for the Corps of Cadets or provide evidence of previous satisfactory college work. Qualified veteran students applying as transfer students must meet the requirements as stated in this catalog under the "Transfer Student Admissions" section.

#### **Personal Requirements:**

- A. Veteran applicants are civilians and are not subject to those personal requirements specific to the Corps of Cadets. They will not be subject to the RPED or ROTC requirements.
- B. Veteran applicants must not have a record of conviction of a criminal offense showing poor moral character.

#### **Admissions Procedure:**

In order to be considered for admission as a veteran student at The Citadel, the following actions must be completed:

- A. Submit a complete Veteran's Application for Admissions with a non-refundable \$40 application fee.
- B. Request all high schools and colleges attended to send official transcripts (if high school was completed by GED test, submit a copy of the equivalency certificate).
- C. Request the College Entrance Examination Board (SAT) or the American

College Testing Programs Assessment Exam (ACT) send to The Citadel, Office of Admissions the latest SAT or ACT test scores.

D. Submit DD Form 214 (member copy 4).

### **Transfer Student Admissions**

A student who is applying for admission to the Corps of Cadets as a transfer student from another accredited college or university must have an official transcript sent directly from any college or university previously attended to the Office of Admissions at The Citadel. The high school record and college entrance examination scores will also be considered. In addition to meeting all the personal requirements listed above for cadet admission, a transfer student must have completed a minimum of two semesters as a full-time student and must have accumulated at least 24 hours of credit, maintaining a GPA of at least 2.0 (on a 4.0 scale) on courses equivalent to those offered at The Citadel. Students presenting college transcripts with less than two full-time semesters will be reviewed on a case-by-case basis. It is important for prospective students to realize that meeting any of the minimums stated in this section does not guarantee admission as a transfer student.

*Transfer students must complete a full year in the Fourth Class System regardless of the number of academic credits transferred to The Citadel. Exceptions to this policy will be considered on an individual basis for transfers from federal academies.*

### **Credit Earned Through Testing**

#### **International Baccalaureate Program**

The Citadel recognizes the International Baccalaureate (IB) and awards college credit for scores of 4 or higher on "higher level" examinations in the IB Program. The number of credits will be determined by the score obtained. A complete listing of course credits that may be earned through the IB Program may be acquired from the Registrar's office.

#### **CEEB Advanced Placement Program**

The Citadel awards advanced placement credit to applicants who score 3 or higher on appropriate examinations. Applicants desiring Advanced Placement credits must have the official score report form sent directly to The Citadel from CEEB. A complete listing of The Citadel's courses that may be completed through Advanced Placement credit may be obtained by contacting the Registrar's Office.

### College Level Equivalency Program

Through College Level Equivalency Program (CLEP) Subject Examinations, students are permitted to earn college course credits for knowledge they have gained in certain subject areas prior to beginning their college experience. Students are permitted to earn credits through CLEP only during their first year, including summer, at The Citadel. After the student has completed one year at The Citadel, no course credits may be earned through CLEP.

CLEPs credits may be earned under the following conditions:

1. Since all CLEP examinations are not accepted by The Citadel, the student must obtain prior approval through the Office of the Registrar.
2. The score earned must meet or exceed the current minimum scored recommended by CLEP for that subject area exam.
3. The amount of credit will be determined by the scope of the material measured.
4. Because of the laboratory experience is such an integral part of the Core Curriculum Science Requirement, credit for only the lecture portion of a science course may be earned through CLEP. The lab portions must be earned through a laboratory course.
5. Because the basic skills of listening to and speaking a language are such critical components of the Core Language Experience, completing any portion of this requirement through CLEP must be approved by the head of the Department of Modern Languages.

A complete listing of courses for which credit may be awarded through CLEP is available in the Office of the Registrar.

**A student may receive credit for no more than four courses through CLEP or any other “testing out program.”**

### Departmental Testing Out Program

Some Citadel departments have developed a process by which students may earn credit for selected courses. These processes may differ from department to department, and interested students should check with the Registrar’s Office for a list of those credits that can be earned through this program.

**A student may receive credit for no more than four courses through CLEP or any other “testing out program.”**

## Academic Policies

Any exceptions to policies stated in this catalog, purported to have been made verbally to a student by an official of the college, are null and void unless documented with a signed statement from the college official authorized to make the exception.

*This catalog is not an unchangeable contract, but an announcement of the current policies. Implicit in each student’s matriculation at The Citadel is an unwritten agreement to comply with the institution’s rules and regulations, which The Citadel may modify to ensure the quality of its academic programs. When graduation requirements are changed, students will be informed in writing. Every effort will be made to ensure that the new requirements can be met by the student’s original expected graduation date.*

### Catalog of Record

The catalog bearing the number of the academic year in which cadets enter The Citadel will be their catalog of record for matters of academic policy.

When a cadet is readmitted after an absence of at least three academic semesters (summer sessions will not be considered as semesters for this purpose), the catalog bearing the number of the academic year in which the student is readmitted will be the catalog of record for matters of academic policy and graduation requirements.

### Grades

Only letter grades are given to evaluate a student’s progress. The following definitions of letter grades are applicable:

- “A” Superior
- “B” Very Good
- “C” Satisfactory; Acceptable
- “D” Marginal; Passing
- “F” Unsatisfactory
- “P” Grade assigned in pass/fail courses that do not carry credit hours to designate passing performance.
- “S” Grade assigned in pass/fail courses that carry credit hours to designate that a grade of “A,” “B,” or “C” has been earned and credit has been awarded.
- “U” Grade assigned in pass/fail courses and in ENGL 101 to designate that a grade of “D” or “F” has been earned and no credit has been awarded.

“W” Withdrawal from a course prior to the official deadline. After that time, students will receive the grade of “F” should they fail to complete the course or complete it unsuccessfully. Under extenuating circumstances, the grade of “W” may be awarded after the official deadline with the recommendation of the instructor and the concurrence of the Associate Provost for Academic Affairs. Supporting evidence is the responsibility of the student and must be submitted in writing to the Associate Provost for Academic Affairs.

“I” An Incomplete is awarded when course requirements have been very nearly met but for authorized reasons (illness, injury, family emergency, etc.) cannot be completed during the current semester. To be eligible for the grade of “I,” students must be passing at the time they are forced to terminate their participation in the course. Students who are not passing at the time they are forced to terminate their participation will receive the grade of “F” in the course. The grade of “I” must be removed within the first thirty class days of the next full semester, or the “I” becomes an “F.” The summer session will not be considered a semester in this case. Under extenuating circumstances, an extension may be awarded by the Associate Provost for Academic Affairs with the recommendation of the instructor. The removal of the Incomplete is the responsibility of the student. Students may not enroll in a course in which they currently have an “I.” A student is not eligible for Dean’s List or Gold Star awards until Incompletes are removed.

“IP” Grade assigned for courses in which requirements are not expected to be met in one academic term. The grade of “IP” must be removed in the next full semester, or the “IP” becomes an “F.” The summer session will not be considered a semester in this case. Under extenuating circumstances, an extension may be awarded by the Associate Provost for Academic Affairs with the recommendation of the instructor. The removal of the “IP” is the responsibility of the student. Students may not enroll in a course in which they currently have an “IP.”

Should a student fail to complete a semester or summer session for any reason, the grade in each course in which the student is then enrolled shall be “F,” “I,” or “W” as determined by the individual faculty member in consultation with the Associate Provost for Academic Affairs.

No numerical symbol, bracket, or percentage is assigned the equivalent of any grade. Arbitrary distribution of grades according to some formula or curve is not permitted. However, by means of departmental supervision and consultation among instructors, every effort is made to obtain consistent grading standards within the department or school.

End-of-the-semester grade reports and midterm progress reports are made available electronically through BANNER Self-Service.

**Grade-Point Average Computation**

For purposes of ascertaining a grade-point average, grades are weighted as follows:

Grade	Quality-Points Per Semester Hour
A.....	4
B.....	3
C.....	2
D .....	1
F, I, IP, W, P, S, U.....	0

The grade-point average for any semester is determined by dividing the total number of quality points earned by the total number of hours for which grades of “A,” “B,” “C,” “D,” or “F” were received.

The cumulative grade-point average on which graduation, academic probation, and academic discharge are based is determined by dividing the number of quality points earned at The Citadel by the number of quality hours attempted at The Citadel. For this purpose, the number of quality hours includes *all credit hours attempted* at The Citadel for which grades of “A,” “B,” “C,” “D,” or “F” were received. The number of quality points earned includes *all* quality points associated with quality hours earned at The Citadel. The Citadel does not recognize plus or minus grades in undergraduate courses.

**Academic Awards**

*The Dean’s List* is a recognition given for the undergraduate work in a semester to those students who have earned 12 or more semester hours excluding Pass-Fail hours whose grade-point average is 3.200 or higher, with no grade of “I” and no grade below “C.” The medal is worn on the cadet uniform during the following semester. A Dean’s List certificate will be awarded to non-cadet students who meet the requirements for *Dean’s List* for the work in a semester.

*Gold Stars* are awarded to those students on the Dean’s List who have made a grade-point average of 3.700 or higher for the work of a semester. Stars can only be worn on the cadet uniform if the cadet earned them in the previous semester. A Gold Star Recognition certificate will be awarded to non-cadet students who meet the requirements for *Gold Stars* for the work of a semester.

**Pass-Fail**

Juniors and seniors with cumulative grade-point averages of 2.00 or higher may take elective courses on a Pass-Fail option. Normally no more than one

course may be taken under this option each semester, and no more than four courses taken under this option may be used to meet graduation requirements. Students may not change their decision to take a course on a Pass-Fail basis after the first two weeks of the term. Courses taken Pass-Fail carry graduation credit, but no quality points are awarded. Such courses are not included in GPA computations except in determining the First and Second Honor Graduates of the graduating cadet class.

Instructors report grades as usual, “A” through “F.” The Registrar’s Office translates an “A,” “B,” or “C” as an “S” (meaning “satisfactory, credit awarded”). Grades of “D” or “F” are translated as “U” (meaning “unsatisfactory, no credit awarded”).

Cadets who are taking a course under the Pass-Fail option and who wish to be considered for Dean’s List or Gold Star honors must satisfactorily complete the Pass-Fail course and must earn the appropriate GPA on 12 or more semester hours in addition to the Pass-Fail course.

In determining the GPA for the position of First and Second Honor Graduates, courses taken under the Pass-Fail option will be included.

Students desiring to take a course on the Pass-Fail option should contact the Registrar’s Office.

### **Students with Documented Disabilities**

The Director of Services for Students with Disabilities is responsible for determining if a student has a documented disability as defined by the Americans with Disabilities Act and for determining appropriate accommodations and services. Students with disabilities are encouraged to self-identify to the Director upon admission to The Citadel. If the Director determines that a disability warrants substitutions for courses required in the areas of foreign language and/or mathematics, all grades of “F” earned in previously completed courses in that discipline will be changed to “U” and will not be included in computing the student’s GPA. Grades of “A,” “B,” “C,” or “D” made by students in previously completed courses in that discipline will not be altered.

### **Audit Status**

Any student who is eligible to enroll in a particular course may, with the approval of the instructor and the Registrar, audit that course for no credit. There will be no additional charge if the student is enrolled for credit in courses totaling 12 or more hours. For students taking fewer than 12 credit hours, registration fees and 100 percent of the tuition for the course will be assessed. The student may not change the decision to take the course on an audit basis rather than for credit after the first two weeks of the term. Grades will not be given for courses taken in audit status.

### **Change of Grade**

After grades in a course have been submitted to the Registrar’s Office, a change of grade will be considered only in cases of instructor error. The change of grade must be made within one month after the beginning of the next semester following the recording of the grade and must be approved by the head of the instructor’s department/school and by the Associate Provost for Academic Affairs. A grade change may not be based on work submitted after final grades have been submitted.

### **Taking or Repeating Courses to Improve the GPA/Grade Replacement**

A student may not take or repeat a course which is taught at a lower level than or serves as a prerequisite for a course which the student has already completed.

Courses may be repeated under the following conditions:

1. No course may be repeated once a grade of “B” or higher has been earned.
2. If a course is repeated, the last grade of record is used to determine whether course requirements for graduation have been met.
3. If a previously passed course is repeated, the hours may be used only once toward meeting requirements for total hours passed.
4. When courses are repeated under the conditions described above, the original course grade may be replaced by the newer grade when calculating students’ grade-point averages (GPA’s), quality hours, and earned credit hours. Both the old and new grades will appear on students’ transcripts, but only the newer grade will be used in calculating GPA’s. It is the student’s responsibility to complete Grade Replacement Request forms in the Office of the Registrar in order to have the new grade replace the older grade(s).
5. The maximum number of hours for which Grade Replacement will be allowed over the course of a student’s undergraduate career is 16. If a student repeats more than 16 hours of credit, both the old and the new grade will be used to calculate the student’s grade-point average (GPA), quality hours, and earned credit hours. Grades of “S” earned when a student elects to take a course on a Pass-Fail basis may not be used to replace older grades(s).
6. For the purpose of determining graduation honors (e.g., *cum laude*, etc.), both the old grade and the new grade will be used in making the GPA calculation to determine honors eligibility.
7. A student is not eligible for grade replacement after he/she has completed their degree program.
8. Once grade replacement has been requested and applied, it cannot be reversed.

### Transfer Credits

The appropriate deans or department heads have responsibility for considering all transfer courses. Normally, only courses taken at an accredited institution which are comparable in content and credit hours to specific courses offered by The Citadel and in which grades of “C” or better have been earned will be considered for transfer. However, the appropriate dean or department head may accept for transfer to meet General Elective credits, courses that are not offered by The Citadel but which are considered to be worthy of credit as electives and in which grades of “C” or higher have been earned. In those cases where a course has been taken in a department or school not represented at The Citadel, the dean of the school or head of the department in which the student is majoring will determine if the course in question may be accepted for General Elective credit.

To ensure that courses taken away from The Citadel will be accepted for transfer, students *must* obtain written prior approval through the Office of the Registrar. Grades earned in courses transferred from another college will not be computed in the student’s grade-point average at The Citadel. Courses previously passed at The Citadel will not be accepted for transfer. All transcripts sent from another college to The Citadel become the property of The Citadel and cannot be issued to the student or a third party.

*Cadets who have been given Academic or Conduct Discharges from The Citadel or who leave The Citadel while their conduct status is in question may not enroll in courses at The Citadel during that period of discharge nor may they transfer back to The Citadel courses taken during that period of discharge. Cadets who have resigned in lieu of a conduct discharge will be treated as if they have committed the offense with which they have been charged and have been given the most severe consequence available for that offense. Courses these cadets may take during the period of that consequence will not be considered for transfer back to The Citadel. Cadets who have been discharged for reasons other than academic or conduct may transfer back to The Citadel no more than one semester of academic work successfully completed during the period of discharge.*

*All transfer credits are provisional. If a department/school determines within a reasonable period of time after classes begin that the student is not prepared to take a course for which the transferred course is a prerequisite, the allowance of credit is withdrawn, and the student must take the prerequisite course at The Citadel.*

During the fall and spring semesters, a cadet may not take a course offered at another institution, classroom or online. Academic juniors or seniors may, in certain circumstances and with the approval of the Associate Provost for Academic Affairs, take **one** Citadel Graduate College **online, undergraduate** course per semester when space is available.

### Maymester and Summer School

The Citadel offers a Maymester, two day summer sessions, and two evening summer sessions. Over a summer, a student will not normally be permitted to enroll at The Citadel or transfer in from another accredited institution more than four courses and associated labs. If, however, the student is enrolled in Maymester and two summer sessions, a maximum of five courses and associated labs may be taken. The maximum load allowed in Maymester is one course; the maximum allowed in each session of summer school is two courses and associated labs. As with all transfer courses, prior approval is required for transfer of summer courses taken at another accredited institution.

### Class Attendance Policy

The cornerstone of undergraduate education is communication between the teacher and the learner, and at The Citadel, class attendance is mandatory. Students may, however, need to miss class for authorized reasons—athletic events, academic travel, special ceremonies, guard duties, etc. Illness and personal emergencies may also cause students to be absent for legitimate reasons. Should it be necessary to miss a class for any reason, the student will, unless circumstances preclude it, notify the professor in advance and will be responsible for any material missed. Tests and labs are critically important and are scheduled well in advance. It is, therefore, imperative that these are missed only due to circumstances beyond the control of the student and that the student notify the instructor when missing a test or lab cannot be avoided. Students are notified each time they are reported absent from a class and have 72 hours to make requests to their Academic Officer for adjustments.

Absences, whether excused or unexcused, in excess of 20% of the meetings of a particular course can, at the discretion of the professor, result in a grade of “F” in the course. When class attendance is used to adjust or determine a cadet’s grade, the faculty member’s class attendance record will provide the official attendance record. Faculty members may correct submitted class absence data for 6 working days after the day the class meets by sending this information to the Associate Provost for Academic Affairs. However, the Associate Provost for Academic Affairs will accept no late class absence submissions from the faculty after the last day of classes each semester.

As soon as a determination has been made that a grade of “F” for excessive absences is warranted, the instructor will notify the Associate Provost for Academic Affairs, and the student will be assigned an “F.” If, as a result of this action, the total hours carried by a full-time student drops below 12 credit hours, the student is subject to immediate discharge from the College unless there are extenuating circumstances. Such circumstances must be presented in writing to the Associate Provost for Academic Affairs.



When the number of unexcused absences reaches 5, the student and his or her parents will be issued a warning by the Associate Provost for Academic Affairs that continued disregard of the academic policy requiring class attendance will result in an academic discharge from the College. After 10 unexcused absences in any semester, the student will be permitted to complete the current semester, but will be academically discharged from the College for the following semester. Cadets who accumulate 10 or more unexcused absences in the spring semester and who would otherwise be eligible to participate in commencement will not be permitted to do so. In all other circumstances, cadets who accumulate 10 or more unexcused absences will be awarded an academic discharge.

### Final Examinations

Examinations are required at the end of each semester. Examinations will be given at the assigned time. If a faculty member has more than one section of the same course, students may, with the permission of the faculty member and providing that there is no conflict, take the final examination with another section.

Since no scheduling conflicts are possible, make-up examinations should not be necessary. Any examination which is missed due to an emergency should be rescheduled after the regularly scheduled examination period but not during a Reading Period, during ESP, or on a Sunday. If rescheduling is not possible prior to the deadline for submission of final grades, the instructor should award the student an "I." Conflicts resulting from a student's travel arrangements do not constitute an emergency and do not justify a make-up examination. Any exception to these policies must be requested in writing by the student and concurred in by the instructor and the Associate Provost for Academic Affairs.

The final examination schedule is published each semester on the Citadel web page.

### Degrees

The degree of Bachelor of Arts is conferred upon satisfactory completion of the appropriate program of study in chemistry, criminal justice, English, history, intelligence and security studies, modern languages, political science, or psychology. The Bachelor of Science degree is conferred upon satisfactory completion of the appropriate program of study in biology; chemistry; computer science; education; health, exercise, and sport science; mathematics; nursing, physics and sport management.

Graduates in accounting or business administration receive the degree of Bachelor of Science in Business Administration.

Graduates in civil engineering receive the degree of Bachelor of Science in Civil Engineering. Graduates in construction engineering receive the degree of Bachelor of Science in Construction Engineering. Graduates in electrical engineering receive the degree of Bachelor of Science in Electrical Engineering. Graduates in mechanical engineering receive the degree of Bachelor of Science in Mechanical Engineering.

### Requirements for Degree Completion

**Academics:** A student must complete one of the major courses of study outlined in the catalog of record and must achieve a minimum grade-point average of 2.000 based on all quality hours attempted and all quality points earned at The Citadel. In addition, each student must achieve a minimum grade-point average of 2.000 based on all quality hours attempted and all quality points earned in major coursework at The Citadel.

Students majoring in education or in the teaching track of health, exercise and sport science must achieve a cumulative grade-point average of at least 2.750 and a grade-point average of at least 2.750 on all professional education courses; and must have on file in the Registrar's Office at The Citadel passing scores for the appropriate PRAXIS II and Principles of Learning and Teaching (PLT) Examinations.

If a student is pursuing a minor, a grade-point average of 2.000 must be achieved in all coursework completed in that minor.

All students, including transfer students from other colleges, are required to earn at The Citadel a minimum of one-half the semester hours prescribed for their major course of study.

The student's school or department is responsible for ensuring that the student's knowledge in the major is current. Cadets who have met the overall grade-point average and major coursework grade-point average requirements and who are conduct proficient but who have not completed all course requirements for graduation may take not more than two courses totaling 7 semester hours at another institution for transfer to The Citadel in order to complete degree requirements. Prior approval of these courses is mandatory.

**ROTC:** ROTC course work plays a major role in The Citadel's mission to educate and prepare graduates to become principled leaders and is essential for students seeking to receive a commission in one of the armed forces. All cadets must satisfy an ROTC requirement for every semester during which they are enrolled at The Citadel or until they have completed eight semesters or met graduation requirements.

The ROTC Requirement for cadets is as follows:

- Every freshman and sophomore cadet (i.e., all those who are classified 4A, 4B, 3A, or 3B) must enroll in and pass an ROTC class during their freshman and sophomore years. The ROTC classes are offered by the Departments of Aerospace Studies (AERO), Military Studies (MLTY), and Naval Studies (NAVL).
- Cadets who are pursuing a commission in one ROTC program and who then decide to pursue a commission in another ROTC program must have the approval of the head of the ROTC program they are leaving and the head of the ROTC program they wish to join. When cadets are changing to another ROTC, they are not, without the permission of the

head of the ROTC Detachment, permitted to enroll in an ROTC class at a level lower than their academic classification. For example, a member of the sophomore class who wishes to change to another ROTC must enroll in a sophomore-level course in the new ROTC unless the head of the ROTC Detachment authorizes the enrollment in a lower-level course.

- Cadets who wish to move from one ROTC program to another but do not wish to pursue a commission must have the approval of the head of the ROTC department they wish to join, academic advisor, and the Associate Provost for Academic Affairs.
- If a cadet finds that he or she is not able to register for an ROTC class or that he or she must withdraw from an ROTC class, the cadet must have the permission of the head of that ROTC Detachment (for students pursuing a commission) or the Associate Provost for Academic Affairs (for those not pursuing a commission). Failure to complete an ROTC class does not reduce the number of semesters in the ROTC requirement.
- Study abroad cadets will complete ROTC requirements via independent study or online.
- Junior and Senior cadets (i.e., those who are classified 2A, 2B, 1A, or 1B) who wish to pursue a commission in the Armed Forces upon graduation are required to enroll in and pass an ROTC class in every semester during which they are enrolled at The Citadel or until they have completed eight semesters or met graduation requirements.
  - Upon the recommendation of the head of the appropriate ROTC department and with concurrence of the Associate Provost for Academic Affairs, training experiences may be accepted in lieu of ROTC coursework. When approved, the designated ROTC courses will be recorded on the student's Citadel transcript as exempted military credits.
- Junior and Senior cadets (i.e., those who are classified 2A, 2B, 1A, or 1B) who are not pursuing military careers will not take the traditional junior and senior-level ROTC courses designed for cadets who will be commissioned at graduation. These cadets will, instead, fulfill the ROTC requirement by enrolling in a 3-hour ROTC-fulfilment course in the Fall and Spring semesters each year until they have completed eight semesters or met graduation requirements. This ROTC-alternative program for juniors and seniors provides a more relevant set of leadership-oriented courses/experiences for cadets who are not going into the U.S. military and allows the ROTC detachments to focus their resources on cadets who are pursuing a commission.

- Non-commissioning students will be responsible for taking one ROTC-fulfilment course each semester. All non-commissioning students should take LDRS 371. (Business majors and others may fulfill this requirement by taking BADM 371.) The remaining courses may be chosen from a wide variety of classes in the Leadership Studies minor, leadership-oriented courses in students' major fields, and other high-impact practice courses such as internships or undergraduate research courses. Please visit the Leadership Department webpage for a list of ROTC Fulfilment courses.

*ROTC classes (i.e., those designated AERO, MLTY, or NAVL) may not be used to satisfy elective requirements in any course of study.*

**Physical Education:** The required physical education program for cadets is designed to provide an exemplary environment and experiences which contribute to an improved quality of life for the student. The program offers basic instruction in adult and lifetime physical fitness, healthful living, physical activities and recreational sports which are of immediate and lasting value. Each cadet is required to complete RPED 250, Contemporary Health Foundations, and RPED 251, Foundations of Fitness and Exercise, as well as two different activity courses.

**Residential:** Students pursuing a cadet degree must reside in the Corps of Cadets for at least four full semesters.

#### **Requirements for Participation in Commencement Exercises**

Students who have not completed all degree requirements may participate in the May Commencement if the following conditions are met:

1. All grade-point average (GPA) requirements have been met. That is, the cumulative and major grade-point averages must be at least 2.000. For Education majors and Physical Education (Teaching Track) majors, the cumulative and professional education grade-point averages must be at least 2.750.
2. The student must be no more than 15 credit hours short of meeting degree requirements.
3. The student must be cleared by the Office of the Treasurer.
4. The cadet must have completed all tours and confinements and must have passed the Corps Physical Fitness Test as outlined in Chapter 5 of the White Book.
5. The cadet must have met all ROTC and RPED requirements.
6. The cadet must be eligible to complete degree requirements without returning to the Corps of Cadets since participation in commencement is the final act of a cadet.

### Commencement Honors

Commencement Awards are restricted to those graduates who have earned and are using to satisfy graduation requirements a minimum of 90 semester hours.

Annually, the Board of Visitors recognizes the two top graduates of the Corps of Cadets by presenting at Commencement the David Shingler Spell Honor Graduate Awards, honoring David Shingler Spell, Class of 1950. The First Honor Graduate receives the traditional Scholarship Medal and both the First and Second Honor Graduates receive an appropriately inscribed plaque and a stipend to be used for educational expenses at the graduate level or at the discretion of the recipient. These honors are awarded to the cadet graduates whose grade-point averages at The Citadel are highest and second highest among the graduating cadet class. In case of a tie, grades in courses taken under the Pass-Fail option are included in computing the grade-point average. In those cases where the grade-point averages are still identical, the total number of quality points earned is used to break the tie.

To be eligible to graduate with honors and to be eligible for departmental honors, a student must have earned at The Citadel at least half of the semester hours required in the major course of study.

A degree *summa cum laude* is awarded to those students in the graduating class who have achieved a grade-point average of 3.900-4.000.

A degree *magna cum laude* is awarded to those students in the graduating class who have achieved a grade-point average of 3.700-3.899.

A degree *cum laude* is awarded to those students in the graduating class who have achieved a grade-point average of 3.500-3.699.

*School/Departmental Honors* are awarded on the recommendation of deans/department heads to those students of the graduating class who have earned a grade-point average of 3.500 or better in at least 36 hours of work in the major completed at The Citadel.

### Non-cadet Enrollment in ROTC

Non-cadets are not permitted to enroll in ROTC classes unless they meet all the following conditions:

1. The individual must either be on active duty and on orders as a participant in a commissioning program for one of the armed services or be an enrolled veteran student.
2. The individual must be accepted as a degree-seeking student in the day program of The Citadel.
3. The individual must be enrolled as a full-time student in courses in the day program of The Citadel.
4. The individual must be provided leadership experiences outside the context of the Corps of Cadets.
5. ROTC classes will fulfill no degree requirements in a degree program of a non-cadet.
6. The individual must be in uniform while on campus.

### Course Load Requirements

A full-time student must be enrolled throughout each semester in course work totaling at least 12 credit hours. A cadet must be a full-time student. Any cadet who drops below the 12-credit-hour minimum at any time during a semester is subject to discharge, unless there are extremely extenuating circumstances. Such circumstances must be presented in writing to the Associate Provost for Academic Affairs. Students and their parents should be aware that carrying fewer than 12 credit hours may affect insurance coverage with some insurance companies and may also affect eligibility for financial aid.

### Course Overload

The maximum course load (credit hours) which will be approved for either fall or spring semester is normally 22. Overloads may be requested in writing to the Associate Provost for Academic Affairs. Course loads of up to 24 hours may be allowed in certain circumstances. But in no case will an overload of more than 24 hours be allowed.

### Course Substitutions

Course substitutions are made only when justified by extenuating circumstances. Such circumstances must be presented in writing by the student, and the requested substitution must have the support of the faculty advisor, the associate dean or department head, and the Associate Provost for Academic Affairs. Forms for requesting course substitutions are available in the Registrar's Office.

### Combining Courses

Courses may be combined to meet a *maximum of one general elective* requirement under the following circumstances:

1. The courses to be combined must be offered by the same department and must be related in some way.
2. The associate dean or department head of the student's major school or department must provide a recommendation and rationale for combining the courses.
3. The Associate Provost for Academic Affairs must grant final approval for the combining of courses.

### Change of Academic Major

Students who wish to change their major should consult with their academic advisors as well as with the associate dean or department head offering the new major. Forms for requesting a change of academic major are available in the Registrar's Office.

### Pursuing a Double Major

Under certain circumstances, a student may wish to pursue two different majors concurrently within the *same* baccalaureate degree. This will be permitted under the following conditions:

1. Students must declare their intentions to the registrar no later than the fall semester of the junior year.
2. Both majors must be offered under the same baccalaureate degree.
3. Students must complete all requirements for each major.
4. Students, in addition to meeting a minimum overall grade-point average, must achieve the minimum grade-point average requirements of *each* major.
5. Requirements for both majors must be completed concurrently.

A student who has met these requirements will have both majors indicated on the transcript.

### Pursuing a Second Baccalaureate Degree

Under certain circumstances, a student may wish to pursue two *different* baccalaureate degrees concurrently. This will be allowed under the following conditions:

1. The student must complete all requirements of each degree.
2. The student is normally expected to complete requirements for the second degree while pursuing the initial undergraduate degree.
3. Any remaining requirements after the initial degree has been completed may be addressed in the Citadel's summer school, in The Citadel Graduate College, or in Day Student Status.

### Internships

Academic internships offer the opportunity for students to apply academic learning to practical situations.

Normally, only juniors and seniors are eligible for academic internships. A minimum cumulative GPA of 2.500 is preferred. Exceptions to this requirement will be considered by the internship advisor and the department head or associate dean.

To receive course credit, the student should pursue an internship that is clearly related to his or her major course of study and/or career interest. If the internship is not offered by the student's school or major department, the student must have successfully completed appropriate preparatory coursework.

To receive three semester hours of credit, each intern will work a minimum of 50 hours over the course of the semester, to include activities on site at the internship agency and regular meetings with the internship advisor. Each student intern will be required to maintain an internship journal or diary containing a detailed record of internship activities and will prepare a formal paper and/or a formal oral presentation based on a substantive topic related to the internship experience.

A student may earn a maximum of six semester hours of credit from internship courses to apply to a degree program at The Citadel and may participate in only one internship during the semester.

### Taking Graduate Courses

Academic seniors with a cumulative Grade Point Average of at least a 3.20 may take up to six hours of CGC graduate courses in each semester of their senior year when space is available. These courses may provide students a head start on earning a graduate certificate or a graduate degree, but graduate courses may NOT be used to meet undergraduate degree requirements and will NOT be used to compute undergraduate GPA. Students must have the permission of the Associate Provost for Academic Affairs.

### Academic Classifications

Undergraduate students' academic classification is based strictly on earned credit hours. The table below reflects the required number of earned credit hours for each designated academic classification.

Credits Earned	Academic Classification
0-14	First Semester Freshman (4A)
15-29	Second Semester Freshman (4B)
30-44	First Semester Sophomore (3A)
45-59	Second Semester Sophomore (3B)
60-74	First Semester Junior (2A)
75-89	Second Semester Junior (2B)
90-104	First Semester Senior (1A)
105 and above	Second Semester Senior (1B)

Academic classification is used by the Office of Financial Aid to determine loan eligibility. For cadets, the Commandant's Office also uses academic classification to determine room assignments, the appropriate class numeral, class privileges, and eligibility to hold cadet rank.

### Class Privileges

Cadets are considered for privileges based on their Academic Classifications. To be eligible to receive class privileges, a cadet must not be on Academic Probation and must be both Conduct and Physically Proficient.

### Ordering and Receiving a Class Ring

While any rising senior cadet may in the spring of the junior year be measured for and order a class ring, to be eligible to receive a class ring, a cadet must meet these two conditions: (1) have an academic classification of 1A and (2) have a cumulative GPA of at least 2.000. To participate in the Ring Ceremony, the cadet must (3) have passed the Corps Physical Fitness Test as outlined in Chapter 5 of the *White Book*. Cadets who have met academic requirements to receive the ring but have not met the Commandant's Physical Effectiveness Requirements to participate in the Ring Presentation may pick up their rings on the Monday following Parents' Weekend at the Holliday Alumni Center. If a cadet fails to meet requirements to receive the ring with his/her class, the Alumni Association will normally hold the ring until the end of the following spring semester. If the cadet has not met requirements to receive the ring by that time, it will be returned to the manufacturer. The cadet may not order the ring, again, until all requirements to receive the ring have been met. The eligibility of cadets who failed to meet ring eligibility in October of their senior year will be checked again in January. The rings of cadets who have not yet received their rings but will receive their diplomas in May or will be eligible to participate in the commencement ceremony will be cleared to receive their rings before commencement. No other cadets will be cleared to receive their rings until after commencement.

**These are minimum requirements and will not be waived. Students should see the Registrar to confirm eligibility.**

### Academic Criteria for Continuance

In order to be eligible to continue at The Citadel, a student must meet minimum standards for hours earned at The Citadel or properly transferred from another accredited institution and cumulative grade-point average maintained. These criteria are assessed initially after the cadet's second semester at The Citadel and then at the end of each two-semester period.

Credits earned through AP or course work taken by an entering freshman in the summer prior to initial matriculation **WILL NOT** be used toward meeting the minimum standard for hours earned in an academic year. Although The Citadel will notify students who are deficient in either or both areas, it is the responsibility of the student to ensure that these criteria are met. To avoid academic discharge, a student must meet *both* hour and GPA requirements concurrently either at the end of the fall semester, at the end of the spring semester, or in August, as appropriate.

A full-time student (one carrying at least 12 credit hours each semester) must pass at least 24 semester hours in each 12-month period after initial matriculation or readmission. *If a previously passed course is repeated, the hours may be used only once toward meeting requirements for hours passed.*

Part-time students must pass 50% of the hours attempted.

Each student must maintain a minimum cumulative grade-point average as

prescribed in the following table. This grade-point average is calculated as described earlier in this section.

The column labeled "Total Hours" includes 1) all credits attempted for which a grade of "A," "B," "C," "D," or "F" was received at The Citadel, 2) course work transferred from other colleges, and 3) courses taken Pass-Fail or in which the grade of "U" was earned.

Total Hours (Quality Hours Plus Transfer & Pass/Fail Hours)	Grade-Point Average for Continuance on Probation
0-39	1.300
40-69	1.500
70-99	1.700
100 & above	1.900

This table shows the minimum academic progress a student must make to continue at the College and to avoid academic discharge.

*For the purpose of determining academic probation, criteria for continuance, dean's list, gold stars, graduation, and other academic matters, the grade-point average will be computed to three decimal places.*

### Academic Probation

A student is placed on academic probation for any semester when the cumulative grade-point average based on courses taken at The Citadel fails to meet the requirements for continuance without probation as outlined in the following table. A student will be removed from academic probation after the semester in which the cumulative grade-point average meets the requirements set forth in the following table.

Total Hours (Quality Hours Plus Transfer & Pass/Fail Hours)	Grade-Point Average for Continuance without Probation
0-39	1.700
40-69	1.800
70-99	1.900
100 & above	2.000

### Academic Discharge

A cadet's academic record will be subject to formal review for purposes of academic discharge at the end of the second semester after initial matriculation at The Citadel. During these two semesters and the summer sessions after initial matriculation, the cadet must have earned at least 24 credit hours and must at the time of review meet GPA requirements for continuance. If these requirements are not met concurrently at that time, the cadet will be discharged for academic

deficiencies.

Academic assessment for the purpose of academic discharge is conducted at the end of each two-semester period, and the associated summer sessions, after the student is admitted or readmitted. Under the Academic Discharge Policy, cadets may be discharged for academic deficiencies in January or in August of each year. Credits completed while a student is on academic discharge will not normally be accepted for transfer to The Citadel. Exceptions to this policy must have the approval of the Associate Provost for Academic Affairs.

Summer session work cannot make students ineligible to enroll in the following fall semester, if they were eligible for enrollment at the end of the previous spring semester.

Minimum grade-point averages for the various categories are as shown in the previous sections; however, the minimum GPA required will not be raised as a result of summer school work. That is, students moving from one category to the next higher category as a result of credit hours earned in summer school at The Citadel or elsewhere will be required to meet the GPA minimum of the lower category of credit hours for continuance in the following fall term.

Students who voluntarily withdraw at times other than January or August or who are discharged for other than academic reasons will have their academic status assessed upon application for readmission.

Cadets may also be discharged for violating The Citadel's class attendance policy. When the number of unexcused absences reaches 5, the student and his or her parents will be issued a warning by the Associate Provost for Academic Affairs that continued disregard of the academic policy requiring class attendance will result in an academic discharge from the College. If the number of unexcused absences reaches 10, the student will be permitted to complete the current semester, but will be academically discharged from the College for the following semester. Cadets who accumulate 10 or more unexcused absences in their final semester and who would otherwise be eligible to participate in commencement will not be permitted to do so. In all other circumstances, cadets who accumulate 10 or more unexcused absences will be awarded an academic discharge for the following semester.

### **Readmission**

A student who is discharged for academic reasons for the first time may apply for readmission after being out of school for one semester. Summer school does not constitute a semester in this instance. Students who are discharged for academic or disciplinary reasons may not, during the period of discharge, take courses for transfer to The Citadel. The deadline for the receipt of an application for readmission for Maymester and summer School is March 1st, for the spring term is October 1<sup>st</sup>, and for the fall term is June 1<sup>st</sup>.

In addition to any specific readmission requirements stated at the time of discharge, applicants for readmission to the South Carolina Corps of Cadets

must meet the personal and physical fitness requirements for current cadets (see updated Application for Readmission on the Registrar's website). These include the following:

- a. Applicants for readmission must meet the U.S. Army standard for height and weight (Army Reg 600-9) and must be physically qualified as determined by the Citadel Surgeon. Applicants who fail to meet the height/weight standards can gain readmission by meeting the Citadel body-fat standard. Height/weight and body-fat standards for current cadets are detailed in the *White Book*, Chapter 5. These standards are more stringent than those for initial applicants.
- b. Applicants for readmission may not be married nor have childcare responsibility for any minor child related to him or her by blood or marriage.
- c. Applicants must not have a record of conviction of a criminal offense showing poor moral character.
- d. Applicants for readmission must be less than 26 years old on the first day of classes in the semester of their readmission. Applicants for readmission who have not completed their fourth-class system requirements must be less than 23 years old on the first day of classes in the semester of their readmission.

If approved for readmission after an academic discharge, the student will be readmitted on academic probation. Cadets who have been approved for readmission may or may not be assigned to their former cadet company.

### **Second Academic Discharge**

A student who fails for a second time to meet minimum academic criteria for continuance will be awarded a Second Academic Discharge. The Associate Provost for Academic Affairs will review the academic record and any extenuating circumstances the student wishes to present in writing. Based on this review and in consultation with the faculty advisor and the department head or Associate Dean, the Associate Provost for Academic Affairs will determine the conditions under which the student may be considered for readmission after a second academic discharge.

### **"Academic Forgiveness" or "Fresh Start" Policy**

Any undergraduate student who has been separated from The Citadel for 48 or more consecutive months is eligible to apply for Academic Forgiveness.

Upon readmission, a student seeking to apply for Academic Forgiveness must first complete 24 hours at The Citadel with a grade-point average (GPA) of 2.0 or higher on those 24 hours in order to apply for Academic Forgiveness.

To apply for Academic Forgiveness, a readmitted student who has met the minimum GPA requirement on 24 hours must make a formal written request for an academic "fresh start" and must meet in person with the Associate Provost

for Academic Affairs to discuss that application.

If a student is granted Academic Forgiveness, then all previous coursework completed at The Citadel will be treated as transfer credit (i.e., as pass/fail coursework) for the purpose of computing the student's cumulative Citadel GPA; in addition, courses which the student previously passed at The Citadel with a grade of "D" will continue to be counted in the student's total earned hours and will not have to be repeated. All previous grades will remain on the student's permanent record, but they will not be computed in the student's GPA. The transcript will contain this notation: "Academic Forgiveness was granted as of (date of readmission); grades earned at The Citadel prior to this date are not included in this student's GPA calculation." Students who have been granted Academic Forgiveness will not be eligible to receive graduation honors (e.g., *cum laude*, etc.).

### **Conduct Discharge**

Cadets who have been suspended or dismissed or who leave the College with a disciplinary board pending are not eligible to attend any undergraduate class at The Citadel—day, evening, or summer—or to transfer credits back to The Citadel for any courses taken during the period of discharge.

### **Cadets Called to Active Duty**

When Cadets are called to Active Duty, it is the policy of The Citadel to minimize the academic and financial impacts of being required to interrupt their studies. When the cadet learns that call to active duty is likely, he/she notifies the Office of the Associate Provost for Academic Affairs and his/her Tactical Officer.

### **Financial**

If the cadet and his/her instructors feel that completing courses in which he/she is currently enrolled is not a reasonable expectation, the cadet is awarded the grade of "W" in each course and is provided a full refund less room and board used and OneCard charges. When the cadet elects not to withdraw from all courses, refunds of tuition and fees are prorated based on a per-credit-hour rate and the number of credits the cadet and his/her faculty members believe he/she will be able to complete.

### **Academic**

When the date of required departure from The Citadel becomes fixed, the cadet works with his/her instructors to determine if it is reasonable to complete courses after departing on active duty or delaying completion until the cadet returns to The Citadel. In this effort, the instructor is not expected to modify the expectations or assignments of the course, but to help the student determine if it is feasible to continue to work on, and ultimately complete, course requirements after leaving The Citadel. In some cases, the date of departure is sufficiently late in the semester that final course assignments and the final exam can be completed before the cadet leaves campus. This, however, will likely be the exception rather than the rule, and faculty members are not expected to "force" early course completion.

When the faculty member and the student feel that it is not reasonable to complete requirements in a particular course, the student is withdrawn from that course with the grade of "W." When the faculty member and student feel that requirements in a particular course can be completed by the student through independent study, the grade of "I" is given until course requirements are met. If at any time the faculty member and/or the student feel that completing the course is no longer a reasonable expectation, the student is given the grade of "W" in that course.

### **Civilian Students in Cadet Classes**

With the exceptions of Day Students, Returning Veteran Cadets, and Non-Cadet Veteran Day Students, no civilian students are permitted to take classes with the Corps of Cadets. These three student categories are defined below.

### **Day Student Status**

Cadets will normally remain in the Corps of Cadets until degree requirements have been met. Cadets who have completed eight semesters in the Corps of Cadets, all ROTC requirements, all LDRS course requirements, and all RPED course requirements and who have been cleared by the Commandant and the Treasurer may apply for Day Student status through the Office of the Registrar.

Cadets who request Day Student status with the desire to participate in the Long Gray Line Parade and Corps of Cadets graduation ceremony must be certified as proficient in all pillars prior to becoming a Day Student. This is evaluated at the time of the cadet's application by the Office of the Commandant.

If Day Student status is approved, the student must live off campus and may attend day classes with the Corps of Cadets or evening undergraduate classes in The Citadel Graduate College. While on campus in Day Student status, students will wear civilian clothes, but their attire is expected to be compatible with the military environment established by the uniformed Corps of Cadets.

To satisfy the Commandant's requirements for participating in the commencement ceremony, cadets in Day Student status must meet with the Commandant's Sergeant Major no later than the Wednesday of commencement week and review all expectations. These include an inspection of all uniforms related to graduation and Height/Weight screening if necessary.

For Day Students, the following specific dress code is in force:

1. Regulations pertaining to body piercing and tattoos are the same as those for the members of the Corps of Cadets.
2. A broken uniform is unattractive anywhere, but it is especially unsuited for a military college campus or classroom. Portions of cadet uniforms are not, therefore, to be worn by non-cadets.
3. Hair will be neatly trimmed and styled; as will mustaches and sideburns if they are worn. Men will be permitted to wear beards only when required to do so for medical reasons, which must be explained in writing by a physician and submitted to the Associate Provost for Academic Affairs.

4. Students will wear business attire when attending formal occasions when the members of the Corps of Cadets are required to appear in full dress or white uniform.
5. Any student who is not in compliance with minimum standards for personal appearance will be required to leave campus until discrepancies are corrected. Repeated offences may result in discharge from the College.

### **Veteran Students Policy**

1. All veteran students must declare either the day/cadet or Evening Undergraduate Studies Program when they begin taking classes at The Citadel. Veterans who declare themselves day students must follow the South Carolina Corps of Cadets general education requirements and attend the day program commencement ceremony. Veterans who declare their status as evening students must meet Evening Undergraduate Studies general education requirements and attend the Citadel Graduate College commencement exercises.

2. Veterans may change their official student status once in their time as a student at The Citadel. Exceptions to this rule must be approved by the Associate Provost for Academic Affairs.

3. Veteran students may enroll in day or evening classes.

### **Veteran Cadet Program**

Effective with the fall 2008 semester, cadets who have begun their pursuit of the cadet degree and have elected to pursue or have been called to active military service will be provided the following options if their tour on active duty was not for training purposes and they have been discharged honorably with full rights and privileges of a veteran.

*Option 1.* If they are eligible, they may return to the Corps of Cadets to continue to pursue the cadet degree.

*Option 2.* They may enroll as civilian students in classes with the Corps of Cadets to pursue a non-cadet degree with non-cadet diploma and ring (the same diploma and ring available for current Active Duty Students and students in The Citadel Graduate College.)

#### Eligibility Criteria

- must have been sworn into the Corps of Cadets at The Citadel
- must have been honorably discharged from active duty with the full rights and privileges of a veteran
- must meet academic and disciplinary criteria for readmission to The Citadel

Students electing this option

- may enroll in civilian status in classes with the Corps of Cadets
- may enroll in evening classes in The Citadel Graduate College

- are eligible to earn the non-cadet degree/diploma and receive the non-cadet ring currently awarded to Active Duty students and students in The Citadel Graduate College
- may not return to the Corps of Cadets but will be allowed to participate in Cadet Commencement in cap and gown.

At its 14 June 2008 meeting, the Board of Visitors approved the pursuit of the Cadet Degree, Diploma, and Ring through the Veteran Cadet Program under the following conditions:

1. The former cadet has received while on active duty and in combat an injury that precludes readmission to the Corps of Cadets; or

2. The former cadet has served at least four semesters in the Corps of Cadets prior to moving to Veteran Cadet status.

Former cadets who are approved to pursue the Cadet Degree in Veteran Cadet status will be awarded credit for appropriate ROTC courses 301, 302, 401, and 402 based on their active duty service, and requirements to complete RPED 250/251, two activity courses, and LDRS courses will be waived.

Through these options, The Citadel is attempting to address the needs of those students who have formally joined the Corps of Cadets but prior to completing the cadet degree have been called to active duty or have elected to serve on active duty that ends with an honorable discharge as a veteran.

### **Non-Cadet Veteran Day Program**

An eligible non-cadet veteran is defined to be an individual who provides evidence through a Department of Defense Form DD 214 of honorable discharge from one of the Armed Services indicating a minimum of 90 consecutive days of full-time federal active service, other than active duty for training.

#### **Admission Requirements:**

Veteran applicants must meet the academic standards outlined under the High School Course Requirements and Entrance Examinations for the Corps of Cadets found in the Requirements for Admission section of this catalog or provide evidence of previous satisfactory college work. Qualified veteran students applying as transfer students must meet the requirements as stated in Transfer Student Admissions in the Requirements for Admission section of this catalog. Veteran applicants must not have a record of conviction of a criminal offense showing poor moral character. For complete admission requirements, please refer to Non-Cadet Veteran Day Admissions in the Requirements for Admission section of this catalog.

#### **Academic Requirements:**

Veteran applicants are civilians and will not be subject to academic requirements specific to the Corps of Cadets. Such requirements include the RPED, ROTC, and LDRS courses.

### **Student Academic Grievances**

The academic grievance process of the college is reserved for the most serious alleged offenses. These matters deal not with differences of opinion, but with



violations of due process; denial of individual rights; or unequal treatment or discrimination based on sex, race, color, or national origin. Students who feel that they have an academic grievance are directed first to confer with the instructor or other individual(s) involved. Where this does not result in satisfaction or if this step is not feasible, the student should present the grievance in writing to the lowest appropriate level not involved in the grievance, department head or associate dean.

If the matter remains unresolved, the student may present the grievance and the attempted solution in writing to the appropriate dean. If deemed appropriate, the dean may appoint a review committee consisting of three faculty members, with one designated as chair and a student in good standing from the same student category as the grieving student. This committee shall have the authority to interview individuals who may have information pertaining to the grievance and to request records and materials pertaining to the grievance. In a grievance procedure, all employees and students are obligated to provide requested information to the dean/associate dean/department head, or review committee. The committee shall forward its findings and recommendations to the convening dean who shall decide the case. The student may appeal that decision to the Provost who has the authority to settle all student grievances.

### English Fluency Policy

In accordance with the laws of South Carolina, The Citadel ensures the English fluency of its teaching faculty through a two-stage review process.

1. During the interview process, each applicant will make an oral presentation before a group consisting of faculty members and students. Using the included form, each participant will evaluate the candidate's English fluency and clarity of presentation. These evaluations will be a major factor in the selection process, and should a candidate who is ultimately selected be deemed by this evaluation to have a language problem, the extent of this problem, the support to be provided the candidate by the College in addressing this problem, and the expectations for improvement in English fluency will all be clearly stated in the offer of employment.
2. Should the English fluency of a member of the faculty be challenged by a student, standard procedures for student academic grievances as described above will be followed. If a review committee is called for, the native language of one of the faculty members will not be English.

### Ownership of Intellectual Property

#### Preamble

The Citadel has among its primary purposes teaching, research, and the expansion and dissemination of knowledge. Products of these endeavors include the development and use of intellectual property. It is the policy of the College that its faculty, staff, and students carry out their scholarly work in an open and free atmosphere that encourages publication and creation of such works without constraint but consistent with applicable laws and College policy. This policy *will be* in accord with the

guidelines and criteria published in The American Association of University Professors' "Statement of Copyright" (*Policy Documents and Reports*, Ninth Edition, 2001, or subsequent editions).

#### Definitions

Directed Works are defined as those specifically funded or created at the direction of the College, and which may or may not include exceptional use of College resources. They are distinguished from non-directed works, which are pedagogical, scholarly, literary, or aesthetic works resulting from non-directed effort.

Exceptional Use of College Resources is defined as the provision of resources or support by the College for the creation of a work that is of a degree or nature not routinely made available to College employees. Sabbatical leaves, faculty research grants, and faculty development grants awarded by the College upon the recommendation of the Research, Faculty Development, or Sabbaticals Committees, although competitive, are routinely available to the faculty and are therefore deemed non-exceptional unless specifically designated otherwise by agreement between the originator and the Provost.

#### Policy

Ownership of intellectual property will reside with the originator, whether a member of the faculty, a member of the staff, or a student, unless: (a) the property is created at the specific direction of the College; or (b) the originator has made exceptional use of College resources in creating it.

At the time when the work is directed by the College or at the time when the College makes exceptional resources available to the originator of intellectual property, the Provost and the originator will together determine ownership and will negotiate a written agreement concerning that property. These determinations will be made on a case-by-case basis.

### Confidentiality of Student Records

The Citadel complies with the Family Educational Rights and Privacy Act (FERPA), which affords students certain rights with respect to their education records. These rights include:

#### **(1) The right to inspect and review the student's education records within 45 days of the day The Citadel receives a request for access.**

A student should submit to the registrar, dean, head of the academic department, or other appropriate official, a written request that identifies the record(s) the student wishes to inspect. The Citadel official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the Citadel official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

#### **(2) The right to request the amendment of the student's education records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA.**

A student who wishes to ask The Citadel to amend a record should write the official responsible for the record, clearly identify the part of the record the

student wants changed, and specify why it should be changed.

If The Citadel decides not to amend the record as requested, The Citadel will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

**(3) The right to provide written consent before The Citadel discloses personally identifiable information from the student's education records, except to the extent that FERPA authorizes disclosure without consent.**

The Citadel discloses education records without a student's prior written consent under the FERPA exception for disclosure to "school officials" with "legitimate educational interests." A school official has a "legitimate educational interest" if the official needs to review an education record in order to fulfill his or her professional responsibilities for The Citadel. A "school official" is a person employed by The Citadel in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff), or a person or company with whom The Citadel has contracted as its agent to provide a service instead of using Citadel employees or officials (such as an attorney, auditor, or collection agent). At The Citadel, "school officials" include the Board of Visitors; the faculty; and personnel in the Offices of the President, Provost and Dean of the College, Associate Provost for Academic Affairs, Associate Provost and Dean of The Citadel Graduate College, Registrar, Vice President for Finance and Business Affairs, Director of Athletics, Director of Admissions, and Commandant. In addition, the Provost (for academic records) and the Commandant of Cadets (for disciplinary records) may give specific cadets, by virtue of their cadet duty position, limited access to the educational records of other cadets. These cadets must first attend a FERPA briefing and sign a Statement of Understanding before being provided access to other students' educational records.

The Citadel may also disclose appropriately designated "directory information" without written consent, unless a student has advised The Citadel to the contrary. "Directory information" is information that is generally not considered harmful or an invasion of privacy if released. Directory information includes student name, local and permanent address and telephone number, e-mail address, photograph, date and place of birth, major field of study, class schedule, full or part-time status, Dean's List and Gold Star List, ROTC branch, dates of acceptance and attendance, years in school, anticipated date of graduation, degrees and awards received, graduation honors, academic and military awards, the most recent previous educational agency or institution attended by the student, cadet company and rank, duty status, class absence status, participation in officially recognized activities and sports, weight and height of members of athletic teams, U.S. citizenship, extracurricular activities, and residency status.

The Citadel may disclose directory information to parents, the public, and outside organizations without prior written consent. Outside organizations include, but are not limited to, companies that manufacture class rings or publish yearbooks. Students who do not wish to have directory information published must notify the Registrar within two weeks of the beginning of the fall semester

each academic year. Requests to keep directory information confidential are valid only for the year in which they are made.

The Citadel will disclose to the alleged victim of any crime of violence the final results of any student disciplinary proceeding conducted by The Citadel against the alleged perpetrator of such crime. Both the accuser and the accused will be informed of the final outcome of any Citadel disciplinary proceeding based on an alleged sex offense.

The Citadel may also disclose to parents, without a student's consent, alcohol or drug violations of either the College's policies or local laws by students under 21 years of age.

The Citadel will also disclose, to the court, information from a student's file if that student or the student's parent has initiated legal action against the institution or if the institution has initiated legal action against the parent or student.

**(4) The right to file a complaint with the U.S. Department of Education concerning alleged failures by The Citadel to comply with the requirements of FERPA.**

**The name and address of the office that administers FERPA is:**

**Family Policy Compliance Office  
U.S. Department of Education  
400 Maryland Avenue, SW  
U.S. Department of Education  
400 Maryland Avenue, SW  
Washington, DC 20202-5901**

A copy of the "Family Educational Rights and Privacy Act," as amended, and details of The Citadel policy on maintaining and disclosing student records may be obtained from the Office of the General Counsel.

## STUDENT SUPPORT PROGRAMS, SERVICES, AND ACTIVITIES

The student support programs, services, and activities offered by The Citadel complement and support students' academic development by . . .

- . . . promoting discipline, responsibility, character development, and self-confidence;
- . . . equipping students with skills necessary for academic success;
- . . . developing leadership skills;
- . . . enhancing ethical development;
- . . . increasing cultural awareness and the appreciation of diversity;
- . . . encouraging students to become responsible professionals in their chosen fields; and
- . . . providing activities that promote personal health and physical fitness.

The intent of the student support programs is to encourage the development and integration of personal values and habits that will remain with the individual for life.

### Student Advisory and Counseling Services

#### Academic Faculty Advisor

Each student is assigned a faculty advisor who provides counsel concerning course selections and options within particular courses of study. Though students are encouraged to visit their advisors throughout the academic year, formal planning sessions are designated each semester during preregistration and registration.

#### Tactical Officer

TAC stands for Teacher, Advisor, and Coach. TACs serve as the primary integrator for cadet leader development and are the key assessors of cadet performance. They are available to coach and assist cadets in the execution of their leadership roles. TACs seek out reports from faculty, staff, and coaches to assist them in providing cadets with a holistic assessment of their strengths and weaknesses and regularly counsel and mentor cadets on their progression through the four-year model. Finally, TACs certify cadet performance in the Military, Moral-Ethical, and Physical Effectiveness Pillars.

#### Company Academic Advisor

Each cadet company is assigned a specially chosen member of the faculty or staff who works closely with the company tactical officer and the cadet chain-of-command to ensure that academic and military requirements are compatible and that cadets are aware of academic resources and services available to them on the campus.

### Prelaw and Premedical Advising Services

The Citadel provides counseling and guidance to all students who have an interest in attending law or medical school after graduation. Students interested in a law career should seek advice early in their college careers from the chair of the Prelaw Advisory Committee. Students interested in medicine and related fields should seek early advice from the chair of the Premedical Advisory Committee. Each committee is composed of faculty members from academic disciplines related to these professional fields.

### Career Center

The Citadel Career Center has a primary mission of providing the training and resources that enable students to make well-informed career decisions. The first step in this process is providing a career assessment for incoming students to help them in selection of majors and in identification of career paths of greatest interest for further exploration.

The Career Center provides group and individualized instruction and assistance to students in exploring career options, the career planning process, resume construction, internships and summer employment, exploring graduate and professional school, networking, interviewing, the job search process, and success in the first job. A comprehensive website with related information is provided. Students should participate in all training sessions and follow career planning guidelines provided on the Career Center website.

The Career Center coordinates biannual Career Fairs (one per semester), information sessions, workshops, information sessions, and other career-related events. It also provides an online job board and resume database which are used by many employers to advertise opportunities and find candidates. It is important that students take full advantage of these events and services. The office distributes a wide variety of career planning and career search information to students, in-house and online. A computer lab is available and used from real-time career counseling during allotted drop-in hours.

The Career Center also coordinates the "Citadel in DC" program each summer, a 10-week opportunity to live, learn and intern in Washington, DC.

The Career Center is located at 573 Huger Street. Please visit [www.citadel.edu/career](http://www.citadel.edu/career) for additional information.

### Religious Support

Pastoral support and counseling is an important component in the overall design of The Citadel's advisory program. The Chaplain to the Corps of Cadets and the campus ministers are available to assist students with pastoral support and counseling, which includes dealing with life problems, in the context of religious faith. With the chaplain and campus pastors, students are assured of care, concern, and confidentiality, whatever their situation.

### **Counseling Center**

The Citadel Counseling Center provides professional, confidential short-term counseling to currently enrolled students at no charge. Personal and substance abuse prevention counseling are available by appointment. In the event of an emergency, counselors are also available to provide crisis intervention without an appointment. In addition, the Counseling Center staff provides referrals for off-campus psychiatric evaluations and/or long-term counseling.

The Citadel Counseling Center provides individual assessment, including the administration and interpretation of personality and interest inventories. Students may complete these assessments in an effort to address personal or career concerns presented in individual counseling.

The Citadel Counseling Center is located at 203 Richardson Avenue behind Bond Hall. Students are encouraged to contact the Counseling Center directly to schedule appointments for counseling or assessment.

### **Alcohol and Substance Abuse Prevention Services**

The Counseling Center provides evaluation and assistance in the treatment of alcohol and substance abuse. Strategies utilized include an in-depth alcohol and substance use evaluation, individual short-term counseling, an online alcohol education course, and appropriate referrals for long-term outpatient and inpatient treatment. These services, which are available to currently enrolled students, are aimed at reducing a student's risk for developing serious problems associated with the abuse of alcohol and other substances. In addition, any cadet who is mandated by the Commandant's Department to complete a minimum of two meetings with a counselor will receive an in-depth alcohol and substance use evaluation and recommendations for additional services are provided to the cadet as appropriate.

Students are encouraged to contact the Counseling Center directly to schedule appointments for individual counseling.

## **Instructional Support Services**

### **Daniel Library**

The mission of the Daniel Library and The Citadel Archives and Museum is to deliver exemplary services for learning, decision support, and scholarship that inspire and excite our students, faculty, staff, administration, and alumni; to provide innovative information leadership to administrative and support units; to preserve The Citadel's unique and important information assets; and to offer noteworthy learning experiences and professional research services to Charleston, the Lowcountry, the state of South Carolina, and beyond.

During the academic year, the Daniel Library is open seven days a week. Visit the Daniel Library website to access library online resources (<https://library.citadel.edu>).

The Daniel Library provides organized access to professionally curated research and information resources and creative technologies. The collection consists of over 186,853 print materials; 174,944 electronic books; 125 online full-text and citation indexes; and over 361,000 electronic full-text journals and print journal subscriptions. In addition, the Library holds DVDs and streaming videos, microforms, maps, and government documents. Through PASCAL Delivers, interlibrary loan, and document delivery, the Library is able to provide free and efficient access to materials outside its own collections.

To enable students to make the best use of the array of resources and services available to them, the Library provides instruction classes about locating, evaluating, and effectively using information along with individual research assistance via phone, email, text, online chat, and personalized research consultations. In the required First-Year Experience course (CSI or LDRS 101), students learn to access Library resources, evaluate information for authority, accuracy, and level of scholarship, and incorporate appropriate information into research projects. Course-specific research classes organized by liaison librarians focus on the unique information needs of each student and address specific research requirements of each course.

The Daniel Library facilities feature collaborative spaces and individual and group study rooms. Students may reserve a study room for up to two and a half hours per day. Room reservations can be made online and in advance (<https://citadel.libcal.com/booking/study>). Facilities also include a wireless network accessible with Library laptops or students' personal laptops and mobile devices. Students may also check out laptops and use them in the library. All computers allow access to electronic resources and the Internet, as well as software for word processing, spreadsheets, databases, and presentations. Examples of site licensed software available to students are statistical analysis software SPSS, investment information through Morningstar, the New York Times, and Wall Street Journal.

The newest addition to The Daniel Library is The Citadel Makerspace. The mission of this new space is to foster innovation, ingenuity, and creativity through the exploration of new and emerging technologies in a collaborative environment, regardless of one's department or level of knowledge. Students can make use of five 3D printers, a mini CNC milling machine, high-powered PCs and Macs with creative software, an electric cutter, digital sewing machine, thermal binder, and other creative project materials. More information about the Makerspace can be found at <https://library.citadel.edu/makerspace>. Students can also check out circulating technology with their Citadel OneCard. Supplementing exploration and project creation beyond the Library's walls, available

technologies include: GoPro cameras, Google VR Glasses, headphones, digital recorders, Arduino & Raspberry Pi kits, camcorders, and more.

In addition, Daniel Library Friends (<https://library.citadel.edu/friends>) sponsor a series of cultural events for the campus community throughout the year, featuring cadets, alumni, authors and other notable presenters.

The Daniel Library also houses The Citadel Archives and Museum (see “Archives” and “The Citadel Museum” sections for more information) and displays unique, historically significant portraits, murals, and artifacts throughout the building.

### **The Citadel Archives**

The Citadel Archives, located on the 3rd floor of Daniel Library, houses over 300 collections, including papers of Citadel Presidents, institutional records and publications, letters, diaries, speeches, photographs, audio and video recordings relating to The Citadel’s history. In 1966, General Mark W. Clark donated his military and official papers covering his career in World War II, the Austrian Occupation, the Korean War, and presidency at The Citadel. Other notable collections include the Civil War letters of General Ellison Capers and the papers and diaries of Colonel Oliver J. Bond. Authors and scholars frequently visit the Archives to research our collections. Visit the Archives website (<https://library.citadel.edu/archives>) to access our online guide to collections and our digital collections. To schedule access to archival materials, send your request to [archives@citadel.edu](mailto:archives@citadel.edu).

### **The Citadel Museum**

Also on the 3rd floor of Daniel Library, the Museum reopened to the public in 2016. The Museum contains exhibits which trace the history of The Citadel from its founding in 1842 to the present. The exhibits feature the military, academic, social, and athletic aspects of cadet life as illustrated by changes to cadet uniforms over time. In addition, Citadel class rings from 1895 to the present are exhibited. Also on display are two swords that belonged to notable Citadel alumni: Colonel Charles Courtenay Tew, first honor graduate, and Major James B. White, Citadel Superintendent and leader of the Battalion of State Cadets. The Museum is open to visitors during library operating hours; please call 843-953-2569 with any questions. <https://library.citadel.edu/museum>.

### **Computing Resources**

The Citadel provides all students with an email account and access to Microsoft Office. The campus has over a dozen computer labs located in classrooms and a small computing space in each of the barracks. All labs are equipped with personal computers and networked printers. Most of the college’s 100+ classrooms and auditoriums are equipped with multimedia technology, such as

projection systems and interactive whiteboards.

Information Technology staff members assist students at the IT Help Center, located on the second floor of Bond Hall. The Help Center is open from : 8:00-9:00 M-TH, 8:00-5:00 Friday, 9:00-3:00 Saturday. The Multimedia Service’s staff, located in the Multimedia Studio in Bond Hall, assists students with designing and editing graphics, creating computer and poster presentations, and creating and editing video and audio projects.

The Citadel has a high-speed campus-wide network that connects virtually every computer on campus to the Internet. Much of the campus is also configured with wireless networking.

Most cadets bring a personal computer of their own to use in the barracks. Information Technology staff and student workers assist to answer questions and solve computer problems per the IT Technical Assistance Policy.

The college encourages students to review The Citadel’s website prior to purchasing a computer or software application in order to: review the minimum requirements for compatibility with The Citadel’s network, learn about academic pricing discount opportunities, and understand warranty information for technical support.

Review The Citadel’s Information Technology Computing website at [www.citadel.edu/its](http://www.citadel.edu/its) or contact the IT Help Center staff at 1-843-953-HELP (4357) for more information.

### **Office of Study Abroad, International, and Domestic Programs**

The Office of Study Abroad, International, and Domestic Programs works to make study abroad programs an integral part of students’ academic, leadership, social, and personal development during their time at The Citadel. By making international education both meaningful and accessible, Citadel graduates will have broadened their perspectives and will thrive as principled leaders in a global society.

Currently, the Office of Study Abroad offers a myriad of study abroad choices to fit the student’s individual ambitions, academic needs, and interests. The duration and types of programs include a variety of experiences such as a full semester abroad, summer programs, international internships, service learning, and exchange programs. All study abroad programs, both short- and long-term, are validated by the Office of Study Abroad, International, and Domestic Programs and are included on the student’s experiential transcript.

It is the policy of The Citadel that students will study abroad only during the summer, fall, and spring-break terms. Study abroad applications will not be accepted during the spring semester without prior approval and only on a case-by-case basis. Students are encouraged to come by the office where they may view resource materials, receive guidance on available programs, and receive assistance on the study abroad application process.

Under the Office of Study Abroad, International, and Domestic Programs is the Office of Fellowships. This office identifies superior students and helps them prepare for national and international fellowships. Experienced faculty in each department find and enhance emerging talent. Promising candidates are aided in cultivating their areas of expertise by the Star of the West International Summer Scholarship which supports overseas travel, advanced study, independent research, and field experience.

The Office matches the student's ability and interest with appropriate opportunities. The Director serves as the campus representative for various granting organizations, disseminates information, counsels student candidates, collects applications, schedules interviews, certifies nominees, and offers a preparatory course for qualified students who plan to apply for nationally competitive fellowships. The Office coordinates all campus Fulbright initiatives, publicizes available grants, and provides assistance to graduate students and faculty at all stages of the applications process. The office is located in Richardson 202, 2<sup>nd</sup> floor, where cadets, graduate students and faculty are encouraged to visit.

FELP 301 *Fellowship Preparation* Three Credit Hours

This course helps prepare highly qualified freshmen, sophomores and juniors to apply for nationally-competitive fellowships including Fulbright, Truman, Rhodes and Marshall scholarships. The focus is on developing the critical thinking skills that are vital in preparing for such awards. Based on similar courses at West Point and the Naval Academy, this course is seminar-based, including guest lectures by foundation representatives and past fellowship recipients. Participants will target pertinent awards, draft curriculum vitae, personal statements and project proposals. Participants must have a 3.3 GPA and permission from the instructor to be admitted into the course offered each spring semester.

### **Academic Support Center**

The Citadel Academic Support Center (ASC) provides support to Citadel students through the following programs:

- Academic Coaching Program
- Athletic Academic Services
- Mathematics Lab
- Services for Students with Disabilities
- STEM Lab
- Subject-Area Tutorial Program
- Supplemental Instruction Program
- Writing Lab

These programs are available to all Citadel students.

The staff is comprised of professional tutors, graduate assistants, undergraduate students, and full-time personnel. Students may set up an appointment by

emailing the ASC at [ascenter@citadel.edu](mailto:ascenter@citadel.edu), calling 843-953-5305, or stopping by 117 Thompson Hall.

For further information about the ASC and its programs, please visit our website at [www.citadel.edu/asc](http://www.citadel.edu/asc).

### **Office of Multicultural and International Student Services**

The Office of Multicultural and International Student Services (MISS) promotes an appreciation for diversity among students, faculty, and staff. Multicultural Student Services encourages an attitude that celebrates multi-ethnic perspectives of various cultures and backgrounds. Programming and activities sponsored by the office are designed to increase the involvement of minority students in extracurricular activities; to assist first-year and transfer students with the transition into the Corps of Cadets; to enhance interaction and communication among all students; and to enable students of color to celebrate their cultural heritage with pride.

Assistance is offered to students, faculty, and staff who have concerns relating to race relations, campus diversity, or multicultural awareness. Resource materials including videos, study guides, and directories, are available for use by cadet companies, classroom instructors, and clubs and organizations.

The MISS Office offers a variety of services for international and American students. The office provides freshmen orientation programs, immigration advising and assistance, and helps with personal and academic concerns for international students. The office further serves as a liaison with embassies, acts as an advocate for international students with campus offices, organizes off-campus cultural programs, and sponsors international activities.

### **Religious Activities**

College years are exciting times of growth and challenge, when a young person's faith and religious heritage are examined in the light of new experiences and perspectives. While college years are occasionally marked by a "crisis of faith," they frequently are also marked by a deepening commitment to life-long religious values. The Chaplain, who also serves as the Director of Religious Activities, is committed to assisting in that deepening commitment.

Working closely with the Cadet Chaplain in the coordination of all religious activities are the Cadet Regimental and Battalion Religious Officers. Additionally, the college is fortunate to have twenty-three campus pastors or ministry directors representing Catholic, Orthodox, Jewish, Muslim and fourteen Protestant denominations and Para-Church ministries. These leaders work together to maintain a strong religious foundation for the ethical and moral pillar, one of the four pillars in The Citadel's whole person concept. Faith group meetings are held each Monday evening and Para-Church groups meet each Thursday

evening for study, fellowship, and worship. While attendance at all chapel or campus religious activities is optional, all cadets are encouraged to explore their faith as a part of the growing process of their development as leaders.

#### **Denominational Faith Groups:**

African Methodist Episcopal  
 Baptist Collegiate Ministry  
 Catholic  
 Anglican  
 Episcopal Church SC  
 Jewish Student Union  
 Latter-Day Saints  
 Lutheran Student Movement  
 Muslim Student Association  
 Orthodox Christian Fellowship  
 Presbyterian Student Association: Presbyterian (PCUSA)  
 Reformed University Fellowship: Presbyterian (PCA)  
 Wesley Foundation (United Methodist)

#### **Para-Church Nondenominational Groups:**

VALOR (Campus Crusade for Christ-CRU)  
 Campus Outreach  
 Officers' Christian Fellowship  
 The Navigators  
 Fellowship of Christian Athletes

#### **Campus Worship**

Built in 1936, Summerall Chapel has held a special place in the life of the Corps of Cadets since its dedication. In the first place, it is for many of our cadets a place of sanctuary, a safe haven away from the constraints and stresses of cadet life. Secondly, it is, of course, a place of worship. Throughout the school year, there are weekly Protestant and Catholic services of worship on Sundays and an Anglican worship service on Monday evenings. Cadets provide dynamic vibrant leadership in all of these services. Finally, it is for all who enter a place of prayer. It's not uncommon throughout the week to find staff and faculty sitting in prayer. The inscription on Summerall Chapel, "**Remember Now Thy Creator in the Days of Thy Youth**" (Ecclesiastes 12:1), embodies the focus of ministry at the chapel and its importance to cadets who need a source of strength beyond their personal means.

#### **Citadel Chapel Choirs**

Three cadet chapel choirs enhance services of worship on campus. They are the Catholic Chapel Choir, the Interdenominational Protestant Choir and Gospel Choir. These three choirs combine for special events each year such as Parents' Day, Homecoming Sunday, the Christmas Candlelight Services, and Corps Anniversary Sunday.

#### **Greater Issues Series**

The Greater Issues Series presents two or more major addresses each academic year. In 1954, the series was inaugurated by General Mark Clark to enhance the preparation of Citadel cadets for roles as responsible members of our society. Since then, these addresses have brought to The Citadel an impressive group of distinguished speakers including Presidents of the United States, American and foreign dignitaries, scholars, diplomats, important military figures, and business leaders.

#### **Fine Arts Series**

Inaugurated in 1965, the Fine Arts Series has presented annually a wide variety of programs which have been both entertaining and culturally illuminating. All fourth-class and third-class cadets are encouraged to attend one approved fine arts performance each semester.

#### **Musical Organizations**

The Citadel Regimental Band and Pipes provides music for concerts, parades, reviews, and other official ceremonies both on and off campus. Music for basketball games is provided by The Citadel Pep Band, a group of members from within the Regimental Band.

#### **Academic Publications**

Founded in the spring of 1993, *El Cid* is the publication of The Citadel's Tau Iota Chapter of Sigma Delta Pi, the National Collegiate Hispanic Honor Society. This publication is a refereed journal in Spanish that publishes select undergraduate and graduate creative writing. Only members of Tau Iota may be selected for the editorial team.

*The Gold Star Journal*, The Scholarly Journal of the Corps of Cadets and Citadel Graduate College, publishes nonfiction papers from any discipline. This journal is produced by a staff of cadets for Corps Day.

*The Journal of the Scipio Africanus Society* is published annually by a staff of cadets and serves as an outlet for cadet independent research in international affairs.

*The Shako* documents the literary and artistic achievements of Citadel cadets and graduate students. All submissions are compiled, edited and published annually by cadets for distribution throughout the Citadel community.

### **The Honor System**

The Cadet Honor System provides a unique contribution to the overall developmental process of the Citadel Experience. As an integral part of Corps life, its purpose is to promote ethical growth and inculcate a sense of integrity in Citadel graduates so that they instinctively conduct themselves in an honorable manner. The Honor Code states that a “cadet does not lie, cheat, or steal, nor tolerate those who do.” The code is enforced and supervised by a Cadet Honor Committee composed of First Class cadets who are elected in the fall of their junior year by the Fourth, Third, and Second Class cadets within their companies. These Honor Committee representatives are responsible for educating and assisting their fellow cadets on the Honor System and interpreting the honor code. When a cadet is reported for an honor violation, the circumstances are thoroughly investigated by members of the Honor Committee. If there is a prima facie case established against the cadet, he or she appears before an Honor Court composed of 10 members of the Honor Committee. A cadet accused of an honor violation is entitled to cadet counsel, and cross examination is allowed. A finding that a cadet has committed an honor violation requires a unanimous secret vote by the Honor Court. If a cadet is found to have committed an honor violation, and if the President confirms the Honor Court’s decision, the cadet is expelled from the Corps of Cadets. Under rare circumstances, the cadet may be granted leniency from the punishment of expulsion. The Honor Committee is responsible directly to the President of the college. A faculty advisor assists the Honor Committee. This officer provides guidance to the Honor Committee and acts in an advisory capacity to the court at each Honor Court trial.

### **Department of Experiential Learning and Cadet Activities**

This department, with offices located in Mark Clark Hall, provides activities and services for cadets to develop outside the classroom that allow them to broaden their talents and interests. Major activity areas include publications, events, student leadership experiential learning opportunities, monthly blood drives, clubs and organizations. The department offers services to cadets, as well, such as the Ride-Drive Program, social media pages, and community service opportunities.

#### **Cadet Activities Publications**

*The Brigadier* newspaper is designed and laid out by cadets. The newspaper is delivered in an online format with print copies available for special editions.

*The Sphinx* yearbook is the college yearbook of The Citadel. It is published annually in the spring by a staff of cadets. This publication serves as a semi-official record of the cadets’ year. The cost of this publication is incorporated into the spring semester tuition.

*The Guidon*, the handbook for the fourth class cadets, is published annually and is available online in early summer for the incoming freshmen. On Matriculation Day, each incoming cadet will receive a hard copy. This book contains a complete description of the activities of the Corps of Cadets, Citadel history, customs and courtesies, and duties and responsibilities of fourth class cadets.

### **Clubs, Groups and Organizations**

Membership in a wide variety of clubs, groups and organizations is available to all Citadel students. All 100+ clubs fall under the four pillars of The Citadel: Academic, Military, Character and Physical. Among these are discussion groups, professional societies, military groups, athletic clubs and religious groups. The span of these activities is so broad and so varied that all Citadel students should be able to find organizations that fit their interests and talents.

### **Intramural, Club and Recreational Athletics (ICRA)**

The purpose of the ICRA program is to provide and promote safe and healthful means for competition, exercise, physical fitness and recreational pursuits for students, faculty and staff. ICRA is a division of the Department of Health and Human Performance (HHP).

#### **Intramural Athletics**

Citadel Intramurals are an integral part of cadet life with year-long competitive activities in individual sports and cadet company team sports. Cadet companies compete annually for the Board of Visitors Trophy, awarded to the Commanding Officer of the company accumulating the most intramural points.

#### **Club Sports**

Citadel Club Sports provides structure for student-run competitive sport teams not governed by the NCAA or Southern Conference, and other sports-related activities that may not be fully supported by the academics of HHP or events of Citadel Intramurals. Club Sport athletes are not part of Corps Squad.

#### **Physical Recreation**

The primary purpose of Deas Hall is to provide instructional support for students in the Department of Health and Human Performance (HHP), and to support activities of Intramural Athletics and Club Sports. Deas Hall is otherwise available to all students, faculty and staff.

More information can be found at: [www.citadel.edu/icra](http://www.citadel.edu/icra).



### **Health Services**

The Citadel Infirmary provides acute care services for cadets in the South Carolina Corps of Cadets. These services include outpatient medical clinics on weekdays, a walk-in nurse clinic after hours and on weekends, and round-the-clock inpatient care (36 beds) during the academic year. In the summer, limited out-patient services are provided for cadets enrolled in summer programs. Inpatient services resume on 1 July.

The Infirmary staff includes a primary-care physician, a family nurse practitioner, a part-time orthopedic surgeon, staff nurses, nurse aides, an administrative assistant, and a receptionist. Certified athletic trainers conduct daily Sports Medicine clinics in the Infirmary to evaluate and treat orthopedic injuries. More serious injuries are referred to the Orthopedic Clinic (Monday and Friday mornings). Athletic trainers also provide coverage for intramural and intercollegiate athletics, on-campus military training, and club sports activities.

Infirmery services are covered by the cadet Infirmary fee. A small inpatient charge is added for daytime and overnight admissions. Supplemental services such as immunizations, medications, lab work, X-Rays, and ECGs are provided for cadets at our cost and are applied to the cadet's OneCard Restricted Account. Prescriptions for medications not administered by the Infirmary are delivered by a local pharmacy which bills the cadet's insurance or charges the cadet's OneCard account. If desired, the Infirmary secretary can provide an itemized list of Infirmary charges for parents to file for insurance reimbursement. The Infirmary is not staffed to file insurance claims.

Cadets are required to carry student health insurance for all semesters they are present on campus. Student insurance is mandatory to defray the costs of hospitalization, emergency care, ambulance transportation, and/or specialty medical and surgical care. Charges for services not provided by the Infirmary must be settled directly with the medical provider. Cadets are required to notify the Infirmary immediately of any changes in insurance coverage.

The Citadel does not have contracts with any off-campus hospitals, urgent-care centers, pharmacies, or medical/surgical/dental providers. In the event of an emergency, two large medical centers are located within two miles of the campus and EMS ambulances are on call 24/7 for transport. For more information on insurance, please visit the website:<http://www.citadel.edu/root/infirmery-incoming-students/insurance-info>.

### **Department of Public Safety**

The mission of the Department of Public Safety is to "ensure the safety and security of all persons and property on The Citadel campus." Public safety officers are state-commissioned law enforcement officers operating under the authority of the State Law Enforcement Division (SLED) with jurisdiction both on and off campus for incidents occurring on Citadel property. The Department of Public Safety is also responsible for enforcing campus parking regulations.

Campus police may be reached at 953-5114. In an emergency, dial 811 from any campus phone.

### **Employment**

The time of a cadet at The Citadel is filled with duties and obligations; however, there is opportunity for campus employment for cadets who believe they can manage the extra responsibility. The College offers a limited number of part-time positions with various campus activities as well as work-study jobs which are available to students with financial need. Employment is designed to provide for a modest portion of college expenses.

### **Cadet Facilities**

#### **Mark Clark Hall**

Mark Clark Hall is named after General Mark W. Clark who served as president of The Citadel from 1954-1965. The campus post office, barber shop, a convenience store, a lounge for upper class cadets, and a Barnes & Noble bookstore are located on the first floor. Buyer auditorium, the Greater Issues Room, a lounge for fourth class cadets, and the offices of the Department of Experiential Learning and Cadet Activities are found on the second floor. The Honor Courtroom is located on the third floor, as are the offices of the Catholic Chaplain, the Episcopal Chaplain, and the campus photography department.

#### **Beach House**

The Colonel Robert R. McCormick Beach Club of The Citadel is located oceanfront on the Isle of Palms, about a half hour's drive from the campus. The five-acre property includes a two-story beach house, the Blue & Grey Pavilion, a sand volleyball and basketball court, and shower and locker facilities. Beach access and parking are available to cadets, students, faculty, staff, Citadel Alumni Association Lifetime Members, and annual donors to The Citadel Foundation or The Citadel Brigadier Foundation above specific levels. Additionally, the venue may be rented for daytime or evening events through the Office of Event Management.

#### **Boating Center**

The Citadel Boating Center membership is available to students, faculty, and staff. Preference is given to students in the use of the center's facilities.

The club fleet consists of canoes, small sailboats, and outboard motorboats. Boating Center facilities consist of a clubhouse, dockage, marine railway, sail loft, and work area for maintenance and repair of small boats. Storage of privately owned boats is available for a small fee.

# Military Policies

## General

The Citadel is justly proud of its military training program which contributes significantly to the State of South Carolina and the nation in the form of military and civilian leadership. The Citadel is one of six senior Military Colleges remaining in the country. Citadel graduates are adding to the rich heritage of their alma mater as officers in the armed forces and as leaders in the state and nation.

The ROTC training at The Citadel is conducted by active duty commissioned and noncommissioned officers of the U.S. Army, U.S. Navy, U.S. Air Force, and U.S. Marine Corps. These active duty military personnel are organized into the Department of Military Science, the Department of Naval Science, and the Department of Aerospace Studies. Cadets are encouraged to seek a commission in one of the armed force services; however, they are not required to accept a commission.

## Commandant of Cadets

The Commandant of Cadets oversees the military aspect of all cadet life. Along with the Chief of Staff, the Assistant Commandant for Discipline, the Assistant Commandant of Operations and Training, the Assistant Commandant for Leadership Programs, the Commandant's Sergeant Major, and his Special Staff, the Commandant designs, plans, and executes various leadership programs and activities for the Corps of Cadets. All cadet discipline, privileges, leaves, and special recognitions are managed inside this department. The Commandant and his team of TAC (Teach, Advise, Coach) Officers exercise the implementation of all Citadel policies as well as Cadet Regulations in their supervision of life in the barracks, through the teaching, advising, and coaching of all cadets. As a senior college Vice President, the Commandant is in continuous communication with the College President on all matters pertaining to the administration, conduct, training, and discipline of the Corps of Cadets.

## Discipline

As a military college, The Citadel sets high standards of conduct and discipline. By instruction and example, cadets are taught to be neat in person and in uniform. Daily inspections of rooms ensure cleanliness and good order. Through individual personal contact, group meetings, and training, cadets are encouraged to uphold the traditions of The Citadel and the standards of honor, duty, and respect which are the core values of the college.

A cadet who commits an act off-campus that reflects adversely on The Citadel or the Corps of Cadets may be punished as if the act had been committed on-campus should the alleged misconduct violate the cadet disciplinary code in the following manner:

- potentially endangers the health, safety, or welfare of members of the campus community, or
- potentially places college property at risk of damage, loss, or destruction, or
- occurs at a time when the cadet represents the College in an off-campus activity, or
- involves conduct that charges one or more of the following:
  - a felony act; a crime of moral turpitude; an act of violence; an act that involves the possession, use, or sale of an illegal drug or alcohol; or, an act involving racial or sexual harassment, sexual assault, or results in the student being found guilty in a court of law or the student declines to contest such charges although not admitting guilt (e.g. no contest or nolo contendere).

During periods of furlough, the cadet disciplinary system may apply if the conduct meets these criteria.

## Leadership

Leadership, initiative, and character are developed by placing cadets in positions of responsibility within the Corps of Cadets. In addition, all cadets are engaged in the Leadership Training Program which covers a wide range of topics to develop problem-solving techniques and expand general knowledge in real-life situations. These value-added sessions are conducted in classroom and practicum environments.

All cadets live in the barracks. From reveille to taps, every hour of the cadet's time is programmed. Regular habits of study and living, attention to duty, obedience to authority, and appreciation for order are considered among the most valuable features of The Citadel education. While some graduates enter the military profession, thousands in all walks of civilian life attest to the high value of the training received at this institution.

The daily routine is regulated by the Corps of Cadets Training Schedule and the Commandant's Yearly Training Plan and supported by the Cadet Regulations which include the *Blue Book* and the *White Book*.

## Allowances of Demerits

Cadets who accumulate more than 20 demerits per month in their senior year, 22 per month in their junior year, 25 per month in their sophomore year, or 30 per month in their freshman year, will be declared conduct deficient. Cadets repeating any part of the fourth class year are allowed only 25 demerits per month. Conduct deficient cadets are not allowed to take normal leaves or passes and are required to serve one hour of punishment for each demerit over the specified limit. Any cadet exceeding the allowed limit of demerits or other punishments may be discharged.

### Clothing/Luggage

All cadets are required to furnish their own sheets, pillows, and pillow cases. A bedspread and blanket will be issued to each cadet when they arrive. Beds and mattresses are provided by the College. Lists of required and suggested items for freshmen to bring can be found on The Citadel webpage inside the *Fourth Class Success Packet*. It is imperative that items be purchased prior to arrival. Training begins immediately and there is no time provided to acquire anything missing.

Cadets are advised to bring inexpensive trunks and suitcases. Luggage must be stored in the Central Warehouse Facility on campus. Only one overnight bag for weekend or athletic trips may be kept in a cadet's room. On a limited basis, excess luggage may be stored in the Central Supply Facility at the risk of the owner.

Luggage and boxes of supplies may be shipped to The Citadel in advance. They should be sent by commercial transportation and clearly identified with the following address: Cadet's Full Name, Central Supply, The Citadel, 171 Moultrie Street, Charleston, South Carolina 29409.

### Automobiles

All vehicles operated on campus by cadets must be registered with the Commandant's Department. Each cadet of the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> class is authorized to have an automobile at The Citadel. Registration is a privilege, not a right. Registered vehicles must meet current home-state requirements with regard to registration, insurance, and safety inspections. All vehicles operated and parked on campus are at the owner's risk. All unregistered or illegally parked vehicles are subject to ticketing and towing at the owner's risk and expense. Certain conduct infractions may affect a cadet's ability to maintain an automobile on campus.

Parking fees are charged for all cadet parking. Each registered vehicle will be assigned to a specific, 24 hour-a-day campus property lot. A set of decals for this lot will be affixed to each registered vehicle, which can **only** be parked in the lot designated. Cadets may park in any space inside that lot except for those assigned to specific leadership positions. These reserved spaces will be identified around each barracks. On major college weekends, cadets may be required to move their vehicles to other college procured locations to allow for family, alumni, and guests to park on or near the main campus.

**NO CADET IS ALLOWED TO PARK IN THE IMMEDIATE VICINITY OF THE CITADEL.** This area is defined by Spring Street on the south, Rutledge Avenue on the east, and St. Margaret Street on the north. Parking in this area will result in ticketing and possible towing by the Charleston City Policy and/or disciplinary action from the Commandant's Department for the cadet. 4<sup>th</sup> class cadets are NOT authorized to have, maintain, drive, or park an automobile on The Citadel campus or within this prescribed area at any time during their freshman year. They should not bring a car to Charleston.

Two- or three-wheeled motorized vehicles may not be operated on campus.

### Reserves and National Guard

Cadets may become members of Army, Navy, Air Force, or Marine Corps Reserves or National Guard (Army or Air). Students who join these organizations should consider joining local units in the Charleston area for ease of transportation and conducting business. Although Reserve and National Guard duty is a priority responsibility, cadets must be aware of their academic and Citadel military responsibilities and make all efforts to ensure that conflicts are kept to a minimum.

### Leave

It is expected that parents will not ask for special leave for their sons or daughters except in cases of extreme emergencies. In every case, the decision is left to Citadel authorities as to whether the circumstances warrant the granting of the leave.

#### EMERGENCY LEAVE.

Emergency leave may be granted in the event of death or critical illness of a member of the cadet's immediate family.

Duration of this leave will be predicated upon distance and time required but should normally not exceed five class days. The immediate family includes parents, grandparents, brothers, sisters, and the permanent resident members of the family.

Critical illness is defined as an illness of such proportions that death may be imminent.

#### SPECIAL LEAVE.

Special leave normally may be granted upon request of the family or guardian for events/activities which involve his/her immediate family.

Cadets may also be granted special leave for such unusual business affairs as cannot be arranged by correspondence but require the presence of the cadet in person. In all cases, the final decision rests with the Battalion TAC Officer.

#### OTHER LEAVE.

The Citadel has a weekend and overnight leave policy based on increasing class privileges for cadets who maintain academic, physical, and conduct proficiency. Fourth class cadets are not authorized overnight or weekend leaves during the first semester.

**Furloughs for the Corps of Cadets are scheduled throughout the year. They include Fall Furlough (November), Winter Furlough (December-January), and Spring Furlough (March). Specific dates for these can be found on the college calendar. Cadets may depart after their last class in the case of Fall and Spring Furloughs which always begin on a Friday and end on a Sunday. CADETS MAY NOT DEPART EARLIER. Parents are highly discouraged from purchasing tickets that require early departure. Cadets**

**will not be allowed to leave. In the case of Winter Furlough, cadets may depart after completing their last exam. Return times from all furloughs are posted on the Commandant's Department website accessed from The Citadel Home Page. It is imperative that ALL cadets return not later than the published accountability formation.**

#### MEDICAL SERVICES.

Except in an emergency occurring on leave requiring immediate attention, a cadet will not arrange for or receive professional treatment from doctors or specialists without the knowledge of The Citadel Physician. Applications for any special leave required for such treatment will be submitted to The Citadel Physician and, if approved, will be forwarded by The Citadel Physician to the Commandant.

Cadets who are receiving medical care under the auspices of a private doctor will in all cases report the nature of the treatment, to include the illness and prescribed medication, to The Citadel Physician.

#### SPECIAL MEDICAL AND DENTAL SERVICE.

(1) Dental work, special eye examinations, etc. should be scheduled during the summer, winter, or spring furlough periods.

(2) If the services of a local dentist, oculist, doctor, or other specialist are deemed necessary, cadets will make their own appointments; however, they must inform The Citadel Physician. If desired, the Infirmary will schedule the required appointment for the cadet.

### **The Fourth Class System**

The purpose of the Fourth Class System at The Citadel is to lay the foundation, early in a cadet's career, for the development of those qualities of character and discipline implied in the mission of The Citadel as a military college—to educate principled leaders with an alert mind and a sound body who have been taught high ideals, honor, integrity, loyalty, and patriotism; who accept the responsibilities which accompany leadership; and who have sufficient professional knowledge to take a place in our competitive world.

These personal qualities must be deeply ingrained in individuals so that neither time nor troubles will diminish their respect for complying with the customs and traditions set forth for the fourth class cadets' conduct. Self-discipline and self-evaluation develop graduates whose integrity and sense of duty cause them to serve selflessly beyond the prescribed limits of their tasks.

The Fourth Class System is both difficult and demanding. It represents an abrupt change from the life normally experienced in the home and encompasses the period from the cadet's arrival for his or her first year at The Citadel until Corps Day Weekend. It is administered professionally and requires a full measure of mental preparedness and physical endurance.

Because of the nature of the new cadets' training during their first weeks at The Citadel, physical demands are great. Experience indicates that the cadets

who, prior to admission, have conditioned themselves physically are best able to meet the training requirements.

At the time of their medical examination, cadets should consult with their physician regarding their body weight. Particular attention should be given to estimated percent body fat, which provides a much more accurate figure for determining proper body weight than height/weight charts. If body weight loss appears to be indicated, cadets should follow the physician's advice relative to reducing caloric intake and increasing caloric expenditure.

The Charleston climate is generally conducive to year-round outdoor physical activity; however, the hot, humid conditions of August and September present several problems worthy of consideration. It is, therefore, important that cadets prepare themselves by controlled exposure to similar conditions during exercise. Preparation guidance can be found in the Fourth Class Success Packet on The Citadel home page.

In addition, each applicant for entry into The Citadel should be assured through a medical examination that there is no history of physical ailments which could possibly cause discharge due to inability to participate in the Fourth Class System.

The Fourth Class System by nature appears arbitrary on the surface. It demands prompt and unquestioning obedience of authority through the use of a collection of customs and traditions. However, each of the elements or customs has a special purpose in furthering a cadet's development.

The system includes standing at a rigid position of attention, turning square corners when walking, undergoing inspections before formations, learning various items of fourth class knowledge, working on approved company details such as minor chores incident to keeping one's own area of the barracks in order, submitting to a variety of minor restrictions concerning the use of certain campus grounds and facilities, the wearing of the uniform, and the general conduct of a fourth class cadet.

Cadets who are unable to meet the desired standards or violate one or more of the customs are subject to corrective action. This can range from a verbal reprimand to walking tours on the barracks quadrangle and may include restriction to the limits of campus. In extreme cases, a cadet who is unable to conform to the military way of life may be brought before a Suitability Board to determine fitness to continue at The Citadel.

The measures described above are designed to test a cadet's mettle and to determine motivation for cadet life. Their value lies in developing cadets' ability to perform their duty successfully under trying and stress-producing conditions.

Hazing is not a part of the Fourth Class System and is not tolerated. The suffering of degradation, humiliation, and indignity does not foster the rapid development of those qualities sought in fourth class cadets.

The Fourth Class System is a formidable challenge to any young person. The decision to enter The Citadel must be preceded by a conviction on the part of the prospective cadets and their parents that these future cadets have the mental and physical characteristics appropriate to the system and possess a

willingness to undergo the system's rigors with a determination to see it through and to reap its benefits.

Although the system is demanding and difficult, the rewards are considerable, and they more than justify the effort. At recognition by the upper class cadets, a better person emerges—one who is mentally, physically, and ethically prepared to accept the responsibilities of leadership which will ultimately be given at The Citadel and in the world.

An incoming cadet is classified as a "Legacy" if at least one or more of the following criteria are confirmed:

- *Father and/or mother are graduates and former members of the South Carolina Corps of Cadets*
- *Brother and/or sister are current members of the South Carolina Corps of Cadets*
- *Brother and/or sister are graduates and former members of the South Carolina Corps of Cadets*
- *Grandfather and/or grandmother are graduates and former members of the South Carolina Corps of Cadets*

These are the ONLY qualifications that relate to the determination of "Legacy" cadets.

#### **Fourth Class System for Transfer Students**

Those students transferring from the national service academies (specifically the Military Academy, the Naval Academy, the Air Force Academy, the Coast Guard Academy, and the Merchant Marine Academy), Virginia Military Institute, or any other institution at which such students have:

- a. successfully completed their participation in a fourth class or plebe system;
- b. been full-time students in good standing in an ROTC program for the period of their enrollment at such an institution;
- c. been enrolled at any of the institutions listed above for a minimum of two semesters;

shall have the option of requesting a transfer out of the Fourth Class System after one semester at The Citadel, provided at that time they are at least academic sophomores. Eligible students exercising this option to transfer out of the Fourth Class System shall have no cadet rank, nor have any authority over the other fourth class cadets for the balance of the academic year. All other transfer students, regardless of academic standing, will undergo a full year of the Fourth Class System at The Citadel. The Commandant of Cadets will make the final decision on requests for transfer.

#### **The Citadel's Physical Effectiveness Program**

There are two (2) parts of The Citadel Physical Effectiveness Program: Weight Management and Physical Fitness. Every cadet is expected to meet the standards established in each of these areas at all times. A Corps Height/Weight Screening is held each fall and spring semester. The Corps Physical Fit-

ness Test is administered each term. By regulation, cadets are required to take these tests every semester. Detailed information on both is found in Chapter Five of the cadet regulation entitled *The White Book*. Cadets not meeting the standards of the Corps Physical Fitness Test are considered Physically Deficient resulting in loss of privileges and rank. Programs are designed to help those cadets work towards reaching the minimum requirements in both fitness and weight management. These programs are mandatory, and it is the individual cadet's responsibility to participate. Seniors who do not pass the Corps Physical Fitness Test as required each semester will not be allowed to participate in the Fall Semester Ring Presentation or the Spring Semester Graduation Activities to include the Long Gray Line Parade and the Commencement Ceremony.

## ROTC Programs

The Citadel offers commissioning opportunities in all branches of the armed services. While every cadet must successfully complete a course in one of four ROTC programs each semester of their freshmen and sophomore year, cadets are not required to enroll in any ROTC commissioning program nor are they required to accept a commission should it be offered.

All cadets are required to enroll in and pass an ROTC course for every semester in which they are enrolled at The Citadel until they have completed four semesters. Study abroad cadets will complete ROTC requirements via independent study/online; see respective ROTC department for approval. If extenuating circumstances beyond the control of the cadet require that he/she withdraw from or not enroll in ROTC, the cadet who is pursuing or may wish to pursue a commission must have the permission of the head of that ROTC Detachment. The cadet who is not pursuing a commission must have the permission of the academic advisor and the Associate Provost. Cadets who miss or fail an ROTC class must meet that requirement in order to graduate. When cadets are making up a missed ROTC requirement or changing to another ROTC, they are not, without permission of the head of the ROTC Detachment, permitted to enroll in an ROTC class at a level lower than their academic class. For example, a member of the senior class who wishes to change to another ROTC must enroll in a senior-level course in the new ROTC unless the head of the ROTC Detachment authorizes enrollment in a lower level course. ROTC classes may not be used to meet elective requirements in any course of study.

### ROTC Enhancement

The Armed Forces Scholarship Program has been established to assist the Air Force, Army, and Navy ROTC Detachments at The Citadel in bringing the best and brightest officer candidates to the school. Prospective students must have a minimum 1200 SAT (or 27 ACT), a minimum high school GPA of 3.2, and have accepted an ROTC scholarship prior to matriculation as a freshman at The Citadel in order to be considered. Recipients of the scholarship will receive an annual award of \$3,500 for each year in which they receive the ROTC scholarship. Recipients of the Armed Forces Scholarship will be notified by The Citadel's Director of Financial Aid & Scholarships.

A student must maintain a 3.0 minimum GPA to maintain the Armed Forces Scholarship. Failure to do so will result in the cancellation of the scholarship. The Armed Forces Scholarship will not be reinstated once it has been lost.

Students who are awarded an ROTC Scholarship after matriculating at The Citadel are not eligible for an Armed Forces Scholarship.

### ARMY ROTC PROGRAM

The mission of Army ROTC is to commission the future officer leadership of the U.S. Army and to motivate young people to be better Americans. Army ROTC is the only commissioning program that offers future officers the opportunity to serve in the regular Army as well as the National Guard or the Army Reserve. Regardless of cadets' academic majors, there is an Army specialty that can fulfill their goals.

### U.S. Army ROTC Graduates

Graduates of The Citadel's Army ROTC program, who have accepted a contract, have the opportunity to serve their country in a variety of branches and specialties. Those cadets who have excelled academically and militarily, both in the classroom and at the ROTC Advance Camp, and who have clearly demonstrated high character and outstanding leadership ability, will be selected as Distinguished Military Students.

Graduates of the Army ROTC program may serve as officers on Active Duty, members of the United States Army Reserve, or Army National Guard. Those who desire to be in the National Guard or U.S. Army Reserve will serve on active duty to complete their officer basic course, and then serve as a "citizen soldier" in a Reserve or Guard unit near their homes, graduate schools, places of employment, or in the Individual Ready Reserve (IRR). No matter what type of option is chosen, the total obligation is eight years of active or reserve duty, or a combination of both.

### Scholarships

The Army sponsors 4-, 3-1/2-, 3-, 2-1/2-, 2-, and 1-year academic scholarships for outstanding cadets who desire careers as officers in the United States Army. High school students must apply before 17 January of their senior year for four-year and three-year Advanced Designee scholarships. Applications may be obtained at [www.armyrotc.com](http://www.armyrotc.com). The application process for two-year and three-year Campus Based Scholarships begins in November of the cadet's freshman (three-year) and sophomore (two-year) years. The Army scholarship currently pays tuition and fees or room and board for qualified applicants. The amounts are adjusted annually due to institutional tuition and fee changes.

Cadets interested in Reserve Component Duty can apply for a two-year Dedicated or Guaranteed Reserve Forces Duty Scholarship or for a two-year Dedicated Army National Guard Scholarship in November of their sophomore year.

### **Pay and Allowances**

Cadets enrolled in the ROTC Basic Course, who are academic freshmen or sophomores, receive a uniform allowance each academic year. Cadets who are in the Advanced Course (junior and senior years) and contracted with the Army to be commissioned when they graduate receive a uniform allowance. Additionally, contracted cadets will receive a non-taxable subsistence allowance based on their MS level for ten months of the school year. Freshmen receive \$300/month, sophomores receive \$350/month, juniors receive \$450/month, and seniors receive \$500/month. All scholarship students receive a textbook allowance of \$600 per semester. Between their junior and senior years, all contracted cadets attend a four-week Advance Camp and receive one-half of the base pay of a Second Lieutenant plus travel to and from either Charleston, SC or their home of record.

### **Summer Training**

Outstanding cadets also have the opportunity to attend U.S. Army training such as Airborne school, Air Assault school, Mountain Warfare training, and/or Cadet Troop Leadership Training (CTLT) with active duty Army units around the globe. Cadets are allowed to enlist or retain their membership in the Army National Guard or U.S. Army Reserve under the Simultaneous Membership Program (SMP).

### **Formal Enrollment Requirements**

The basic requirements for enrollment in the Army ROTC program must be fully met before the Professor of Military Science can consider a cadet for enrollment in the Army program. (Cadets not meeting these standards are not eligible for commissions or ROTC monetary allowances.) To be eligible, a cadet must:

1. Be a citizen of the United States of America.
2. Be of good character. Cadets convicted by a civil or military court of offenses other than minor traffic violations are not eligible for enrollment without specific approval of the Department of the Army. A cadet may apply for a waiver for a conviction, provided the offense was nonrecurring and did not involve moral turpitude.
3. Maintain a satisfactory academic record. A minimum of a 2.00 cumulative GPA is required.
4. Maintain a satisfactory disciplinary record and leadership rating. This rating is determined by the Professor of Military Science.
5. Pass the Army Physical Fitness Test (APFT) and meet/maintain the required height and weight standards.
6. Be physically and medically qualified under Department of the Army medical standards.

Formal enrollment in the Advanced Course and contracting requires a cadet to meet all of the above criteria, and validation of these criteria is normally

done during the cadet's sophomore year. Waivers for physical defects are granted only in exceptional circumstances, and then only by the authority of the Department of the Army.

### **NAVY/MARINE ROTC PROGRAM**

The purpose of the Navy and Marine Corps NROTC Program at The Citadel is to educate and train cadets for professional service as officers in the U.S. Naval Services. The Citadel's NROTC Program is uniquely suited to provide extensive operational training opportunities as a result of being located in proximity to several military bases and training facilities. Additionally, frequent visits to The Citadel and the Charleston area by operational Navy and Marine Corps units provide several "hands-on" training evolutions for students in The Citadel's NROTC Program.

Two programs are offered by the NROTC Program, leading to commissions as Ensigns (Navy) or Second Lieutenants (Marines):

1. The Navy/Marine Corps Scholarship Program includes selected Naval Scholarship candidates assigned to The Citadel who have their tuition and a portion of their college expenses paid by the Department of the Navy and will be commissioned upon graduation.
2. The Navy/Marine Corps College Program is that part of the NROTC Program in which students, who have not received national NROTC scholarships, pursue education and training for commissions in the Navy or Marine Corps. College Program students are eligible to compete for Naval Scholarships while students at The Citadel, or may be selected for Advanced Standing within the College Program.

### **Naval ROTC Scholarship Program**

Navy/Marine Corps Scholarship students are selected through national competition and attend one of the colleges or universities with NROTC units. The Navy/Marine Corps Scholarship midshipmen attending The Citadel may enroll in any academic major offered by the college. However, all Navy option midshipmen, regardless of major, are required to complete MATH 131/132 or MATH 106/107 and PHYS 221/222 (with associated laboratories). All Navy/Marine Corps midshipmen are required to be enrolled in the Service Specific Naval Science Labs. All four-year Navy and Marine Corps NROTC Scholarship students receiving a commission must also attend three summer training sessions with pay. In return, the Department of the Navy, via The Citadel NROTC Unit, provides tuition, certain fees, a textbook allowance, a uniform allowance, and a monthly subsistence allowance. Upon graduation, NROTC Scholarship midshipmen receive commissions as Ensigns in the U.S. Navy or Second Lieutenants in the U.S. Marine Corps and serve on active duty a minimum of five years. For additional information, please see the NROTC website at [www.nrotc.navy.mil](http://www.nrotc.navy.mil) and NROTC Unit, The Citadel's website at [www.citadel.edu/nrotc](http://www.citadel.edu/nrotc).

### Naval ROTC College Program

The NROTC College Program is offered for cadets who wish to earn commissions as officers in the U.S. Navy or U.S. Marine Corps but were not recipients of NROTC Scholarships. College Program students are required to enroll in Naval Science classes, participate with the NROTC Unit in scheduled training and events, and may compete for a variety of other Naval Scholarships offered by the Chief of Naval Education and Training. Each year a number of College Program cadets at The Citadel may receive one, two, or three-year NROTC scholarships.

Additionally, some College Program students, who have not previously been offered Naval Scholarships, may be selected for Advanced Standing prior to beginning their junior year. Students selected for Advanced Standing must attend a minimum of one summer training course, with pay, usually the summer after their junior year. College Program students in Advanced Standing will be provided with all Naval Science textbooks, an annual uniform allowance, and a monthly subsistence allowance during the junior and senior years. Upon graduation, these Naval cadets receive commissions in the U.S. Navy or the U.S. Marine Corps and serve on active duty for a minimum of four years.

### Formal Enrollment Requirements

To be eligible for enrollment in the Naval ROTC program, cadets must:

1. be citizens of the United States;
2. have reached the 17th anniversary of their birth by September 1 of the year enrolled;
3. not have reached their 27th birthday by December 31 of the year they expect to graduate (this can be waived); and
4. be physically qualified. (Defective vision must be correctable to 20/20, and waivers for color blindness may be considered.)
5. Additional program entrance requirements may be found at [www.nrotc.navy.mil](http://www.nrotc.navy.mil).

Those cadets not qualified for or not desiring formal enrollment in either the Scholarship or College Program may participate in Naval Science courses for academic credit only. They will not be eligible for appointment to a commissioned grade.

### NROTC Summer Training

#### NROTC Scholarship Midshipmen

- Required to complete up to three summer training courses of two to four weeks duration
- First Summer Training Course

- o Navy and Marine midshipmen will attend Career Orientation Training for Midshipmen (CORTRAMID). CORTRAMID provides midshipmen with a four week indoctrination to career fields in the Navy and Marine Corps. The midshipmen will receive exposure to operations in each of the following communities:
  - o Aviation
  - o Submarine Warfare
  - o Surface Warfare
  - o Marine Corps
- Second Summer Training Course
  - o Navy midshipmen will participate in a two week leveling crucible called “Battle Stations” that will evaluate the midshipman under pressure and allows for the successful demonstration of watch standing, seamanship, fire fighting, and damage control.
  - o Marine midshipmen will receive training on an active Marine Corps base or on board an amphibious ship.
- Third Summer Training Course
  - o Navy midshipmen will serve aboard an operational ship or squadron in the fleet.
  - o Marine midshipmen will attend Officer Candidates School in Quantico, Virginia.

### Advanced Standing College Program

- College Program students are required to attend one summer training course, usually the summer between their junior and senior year.
- Navy midshipmen will serve aboard an operational ship or squadron in the fleet.
- Marine midshipmen will attend Officer Candidates School in Quantico, Virginia.

Transportation costs to and from the sites of the training will be covered by the Department of the Navy, and cadets will earn summer training pay during the period of training.

### Summary of Estimated Naval ROTC Allowances

#### Navy/Marine Scholarship Program:

Each scholarship pays tuition and registration, college, hospital, and laboratory fees outlined in this catalog. In addition, the following payments are also made by the Navy Department:

1. Uniform allowance—paid over four years
2. Subsistence allowance—monthly—gradually increases with academic standing



3. Summer training pay
4. Book allowance, paid each semester

### **Advanced Standing Program**

Navy Department reimbursements for students enrolled in the College Program are:

1. Uniform allowance—paid over one year
2. Subsistence allowance—monthly—gradually increases with academic standing
3. Summer training pay

### **Naval ROTC Active Duty Commissioning Program**

Active Duty students belonging to the Seaman-to-Admiral 21 Program (STA-21) or Marine Enlisted Commissioning Education Program (MECEP) are exempt from having to enroll in ROTC courses every semester. STA-21 Active Duty students are only required to complete Naval Leadership and Management (NAVL201) and Naval Leadership and Ethics (NAVL403) ROTC courses in order to meet graduation and commissioning requirements. MECEP Active Duty students are required to complete Evolution of Warfare I (NAVL303), Fundamentals of Maneuver Warfare (NAVL402), and Naval Leadership and Ethics (NAVL403) ROTC courses; however, the Professor of Naval Science may grant waivers for Evolution of Warfare and Fundamentals of Maneuver Warfare if these courses cause an academic overload and result in a graduation delay. Additionally, all Active Duty students must also enroll in Navy or Marine Corps Training Labs each semester. The Senior Leadership Integration Seminar (LDRS 411) is not a graduation requirement for Active Duty students.

### **AIR FORCE ROTC PROGRAM**

The mission of The Citadel's Air Force ROTC Detachment is to develop Air Force leaders and citizens of character dedicated to serving the nation.

Emphasis is placed on the preparation of dedicated professionals who readily accept responsibility, think critically and creatively, and write and speak effectively.

Citadel graduates have served the Air Force and the nation well in war and peace. Today's Citadel cadets will assume important command and leadership positions in the United States Air Force, government services, or the private sector.

#### **Four-Year Program**

The four-year Air Force ROTC program at The Citadel serves as a major commissioning route for young men and women interested in becoming officers in the U.S. Air Force.

Students enroll at the beginning of the freshman year, and during that first year, they study the organization, mission, and functions of the Air Force as

well as fundamental leadership, followership and communications skills.

During the sophomore year, cadets will examine the development of air and space power from its inception to its uses today in contingency operations. Cadets who are physically qualified and have maintained good academic standing may apply for entry into the advanced portion of the program. Cadets desiring a commission will attend a summer field training course between their sophomore and junior years.<sup>[P]</sup> Cadets enrolled in the Professional Officer Course—the last two years of the Air Force curriculum—study communication skills, leadership in theory and practice, the principles and functions of management, and problem solving. The final year includes the military justice system, the role of the professional officer, U.S. National Security Policy, and Regional Studies. In addition, cadets continue to prepare for entry into active duty.

### **Formal Enrollment Requirements**

To be eligible to pursue a commission through the Air Force ROTC Program, a cadet must:

1. be a citizen of the United States;
2. maintain a satisfactory academic record (at least a 2.0 cumulative GPA for contract and 2.5 cumulative GPA for scholarship);
3. pass the Air Force Physical Fitness Assessment;
4. pass the Air Force Officer Qualifying Test (AFOQT);
5. be of good moral character;
6. be medically qualified;
7. agree to serve on active duty and/or reserve inactive duty for a specified period:
  - a. four years active duty and four years inactive reserve status for most
  - b. ten years active duty for pilots and six years active duty for Remotely Piloted Aircraft Pilots (RPA), Combat System Officers (CSO) and Air Battle Managers (ABM) after completion of Undergraduate Flying Training;
8. successfully complete a summer field training course.

### **AFROTC Field Training**

Citadel cadets pursuing a commission through AFROTC are required to attend a summer training course at Maxwell Air Force Base in Montgomery, AL and Camp Shelby, MS between their sophomore and junior years. Field training is a memorable experience in which cadets get an introduction to Air Force life and operations. Each cadet receives practical guidance in leadership, small-arms familiarization, physical training, and expeditionary operations.

### **Base Visits**

The vast scope of the United States Air Force operations is difficult to portray in the classroom. The Air Force ROTC detachment travels to Air Force bases

to provide an introduction to the United States Air Force. On these trips, the cadets receive base activity briefings and observe Air Force operations firsthand. They return to school with an accurate perspective of the organization's global nature. Experience has shown that these visits are of considerable value in developing the cadets' appreciation of the Air Force officers' challenging careers.

### **Pay and Allowances**

Air Force contract cadets are provided a monthly subsistence allowance. The current rates are: \$300 for freshmen, \$350 for sophomores, \$450 for juniors, and \$500 for seniors. Scholarship cadets are also paid an annual book allowance and a uniform allowance.

### **AFROTC Scholarship Programs**

Air Force scholarships are awarded under the auspices of two separate program tracks. The first, the High School Scholarship Program (HSSP), is open to graduating high school seniors. The second scholarship track is the In-College Scholarship Program (ICSP), and is open to freshmen and sophomores in certain approved majors. Details on how to apply for HSSP scholarships, eligibility requirements, and the on-line application can be found at the [www.afrotc.com](http://www.afrotc.com) website.

#### **High School Scholarship Program**

The Air Force ROTC High School Scholarship Program provides 3- and 4-year scholarships in three different types: Type 1, Type 2, and Type 7. The application process is the same for each type.

**Type 1** — pays full college tuition for both in-state and out-of-state cadets, most lab fees and \$600 per year for books. Approximately 5 percent of our 4-year scholarship winners will be offered a Type 1 scholarship.

**Type 2** — pays college tuition and most lab fees up to \$18,000 and \$600 per year for books. Approximately 15 percent of our 4-year scholarship winners will be offered a Type 2 scholarship (mostly in technical fields). All 3-year scholarships are Type 2.

**Type 7** — pays full college tuition and most lab fees up to the equivalent of the in-state rate. These students also receive \$600 per year for books. Type 7 scholarships may be converted to a Type 2 for 3 years. Out-of-state recipients attending The Citadel typically convert their Type 7 to a Type 2.

#### **In-College Scholarship Program**

The In-College Scholarship Program (ICSP) is highly competitive and consists of two phases.

##### *ICSP Phase One*

ICSP Phase One is open only to sophomore students enrolled in the Air

Force ROTC program.

Eligible applicants are nominated for ICSP Phase One by the AFROTC detachment commander. Nominees are rank-ordered based on their leadership ability, grades, fitness, and overall participation in the Air Force ROTC program. Headquarters AFROTC makes the final decision and awards scholarships.

Cadets selected through ICSP Phase One are awarded a Type 1 or 2 scholarship.

Selectees are awarded 3-year scholarships. All scholarships activate the term they are awarded.

##### *ICSP Phase Two*

ICSP Phase Two is open to college freshmen in approved majors.

Eligible applicants are nominated for ICSP Phase Two by the commander of the AFROTC detachment.

ICSP Phase Two scholarships are a mix of Type 1 and Type 2 scholarships. Depending on academic major and funding availability, Phase 2 scholarships can be awarded for any of the listed types.

**Type 1** - pays full college tuition for both in-state and out-of-state cadets, most lab fees and \$600 per year for books.

**Type 2** - pays college tuition and most lab fees up to \$18,000 per year and \$600 per year for books.

#### **ICSP Eligibility Requirements\***

To be eligible to apply for the ICSP you must:

- Be a United States citizen;
- Possess at least one standardized test (ACT, SAT or AFOQT) score
- Pass the Air Force ROTC Physical Fitness Assessment
- Have at least a 2.5 cumulative college grade point average
- Complete a physical examination and be certified as "Commission-Qualified" by the Department of Defense Medical Examination Review Board. Non-AFROTC students can apply if the examination has been scheduled. If selected, you cannot activate a scholarship until the medical certification is complete.
- Not already be a contracted scholarship recipient
- Meet the Air Force ROTC age, moral, and other scholarship eligibility requirements.

**\*Eligibility requirements are subject to change.**

## Expenses

The Citadel is supported by the State of South Carolina. The costs of operation are underwritten through fees collected from the students, appropriations made by the General Assembly of South Carolina, and contributions to The Citadel. Nonresidents are required to pay a larger portion of the costs of their education than is required of residents of South Carolina.

The Citadel Treasurer is responsible for the collection of monies due The Citadel. All correspondence concerning fees, payments, and status of accounts should be directed to that office. If referral to a collection agency is required for overdrawn accounts, the amount referred will include the collection agency fee.

If an account is unpaid, the college will initiate internal and external collections proceedings.

These proceedings will include credit bureau reporting, referring accounts to outside collections and State of South Carolina collection efforts. Accounts referred for collection will incur additional collection costs paid by the student.

### Fees

Students attending the day program at The Citadel pay three primary fees: college fees, auxiliary fees, and a OneCard Restricted deposit. Active duty military personnel assigned to military units for educational purposes pay the same college fees as cadets. The college reserves the right to adjust fees to meet the current cost of operation should it become necessary. This applies to all educational programs at The Citadel. Current fees are available on The Citadel's web page.

All fees and deposits are due and payable by semester, prior to the date of reporting to school. Bills are normally due the first Friday in August. Failure to meet billing deadlines subjects the student to being dropped from enrollment at The Citadel. For incoming freshman cadets or returning upper class cadets, failure to meet billing deadlines may result in the loss of space in the Corps of Cadets and a late payment charge. Remittances by money order or check should be made payable to The Citadel and mailed to the Treasurer, The Citadel, 171 Moultrie Street, Charleston, South Carolina 29409. Remittances by credit card (Mastercard, Visa, Discover, or American Express) may be paid on line via a secure connection at the citadel.edu website. There may be a 2.75% convenience fee charged for the use of credit card payments, but no charge for e-check payments.

Parents or legal guardians are responsible for payment of all fees and overdrafts, unless the Treasurer is notified prior to due dates that the student or some other party has assumed this responsibility.

Information relative to financing educational fees on a monthly installment basis may be secured by contacting the Treasurer's Office at The Citadel or by viewing the Treasurer's Office link on The Citadel's web page at citadel.edu. The Director of Financial Aid and Scholarships also has information concerning financing educational fees through loans other than the guaranteed student loan. Financing arrangements require time for processing, so it is essential that application be made as early as possible prior to the beginning of the school year.

*Overdrawn Accounts:* A student whose account is overdrawn will not be issued or be allowed to send copies of his or her official transcript, be issued a diploma, or be permitted to enroll in additional course work until satisfactory settlement of the account has been made.

*Non-negotiable Checks:* There will be a handling charge of \$30 for a non-negotiable check. The college will pursue collection procedures as provided by the laws of the State of South Carolina. The Citadel will not accept personal checks from individuals who have issued two non-negotiable checks or one non-negotiable check which has not been redeemed.

*ATM machine:* The college contracts with a major bank to provide an ATM machine in Mark Clark Hall. Students can access their personal bank accounts through this machine. This is a convenient and secure method to handle cash and eliminates the need for students to have large amounts of cash on hand.

### Resident Tuition and Fees

Any undergraduate student or prospective student whose status concerning entitlement to payment of in-state tuition and fees is uncertain has the responsibility of securing a ruling from The Citadel by providing all relevant information on special application forms. These forms can be obtained from the Office of the Registrar and are to be completed and returned to that office at least two weeks prior to the last day of classes for any semester or summer term for which the student is attempting to qualify for payment of the in-state tuition and fee rate. Until such time that eligibility for residency is confirmed, out-of-state fees will be due and payable. Refunds will be issued when a ruling awards in-state status.

Eligibility for payment of in-state tuition and fees shall be determined under the provisions of Sections 59-112-10 through 59-112-100, South Carolina Code of Laws, 1976, as amended. A copy of this law may be obtained from The Citadel Registrar's Office.

### Fee Descriptions

*College fees* support the general operations of the college. A portion of college fees is earmarked to provide debt service for bonds issued to support construction and renovation of education and general facilities and equipment of the college. These are the only fees that are different for in state and out of state students.

*Auxiliary fees* include athletic support, room, board, infirmary care, and laundry and dry cleaning. A portion of these fees is designed to pay debt service for the auxiliary and athletic facilities.

*OneCard Restricted deposit* is used to pay for uniforms, uniform alterations, accessories, books, academic supplies, and haircuts. The amount of the deposit is determined annually based upon the average needs of cadets. Certain academic programs and certain corps activities will require other expenditures that are unique to that activity. If a cadet's costs exceed the deposit amount, the cadet will be required to pay in full or provide additional deposit money. Any unused portion of the deposit will be carried over to the following semester. All unspent funds will be refunded upon graduation or discharge.

*Uniforms:* All cadets are required to wear The Citadel uniform, which is issued by the College. New cadets are required to be outfitted in new uniforms and uniform accessories issued by the college. New cadets should not bring a supply of civilian clothes other than those which are worn upon reporting to the college, as they are not permitted to wear civilian clothes except during authorized furloughs.

The cost of uniforms, although a paid fee, should be viewed as a clothing expense which is incidental to attending any college. With proper care, uniforms should last for several years. Requirements in subsequent years will depend on the manner in which cadets have cared for their uniforms. The overall cost of the uniforms should not exceed that which would be incurred in purchasing clothes to attend a civilian college. Additional sets of uniforms may be purchased as desired (for cash) in the Cadet Store.

The woolen uniforms issued to cadets are custom-made for The Citadel. Once the uniforms have been fitted, the entire cost will be charged to the cadet. Since the uniforms are tailor-made to the measurements of each cadet after enrollment at The Citadel, every cadet withdrawing from college will be charged a fee for canceling the purchase of the uniforms.

In order to keep the appearance of the Corps of Cadets at the highest level, an inspection will be made of the uniforms of members of the sophomore, junior, and senior classes at the beginning of the school year. If the uniforms do not meet the minimum standards of appearance, the individual will be required to purchase replacements of unserviceable uniform items.

### **Statement of Students' Accounts**

Students have three accounts at the Citadel, a student account, the OneCard Restricted Account, and the Open Account. All are available for review online. *It is incumbent upon the students to verify each charge or credit made to their accounts.*

The Restricted Account and the Open Account are both different accounts on the OneCard.

The Restricted Account is automatically loaded each fall and spring semester. It is used to purchase scholastic items only. This includes books, supplies, haircuts, uniforms, tailoring, and accessories.

The Open Account on the One Card can be loaded with additional funds for use at campus facilities. The Open Account is used mainly to purchase food, drinks, and other items that cannot be purchase on the Restricted Account. To deposit funds, you can send cash or check to the One Card Office located in Bond Hall, room 244. You may also go online via Lesesne Gateway and navigate to Campus Center to deposit funds electronically to the Open Account.

Any unexpended OneCard balance will be held until the student withdraws or graduates from The Citadel.

Full athletic grant-in-aid and full academic scholarship recipients are not authorized to receive a refund. Balances in accounts of full athletic grant-in-aid recipients are refunded to the Athletic Department annually.

### **Other Fees**

*Reservation Deposit:* A \$300.00 deposit will be maintained for each cadet. When there is insufficient money in the cadet's account to cover the cost of damage to buildings, rooms, equipment, or loss of ROTC manuals or government property, this deposit will be used. The unused portion is refundable after graduation or withdrawal from The Citadel.

*Diploma Fee:* The diploma fee is adjusted each year to address the current market price.

*Transcript Fee:* Information regarding transcripts is available on the Registrar's Office web page: <http://www.citadel.edu/root/registrar>.

*Laboratory/Orientation Fees:* Laboratory/Orientation Fees are charged students taking certain designated courses or orientation programs. Fees are billed as part of the preregistered course load.

*Technology Fee:* A technology fee is charged each cadet. The fee partially offsets the cost of the various computer laboratories on campus and the costs associated with having computers in barracks rooms.

*Late Fee:* A significant late fee is charged to all students who are permitted to enroll, even though they may not have satisfied all the financial requirements, i.e. those who have not finalized federal financial aid. Students who sign up for a payment plan and fail to meet the requirements of that plan will be charged the same late fee at the time they fall behind.

*Other Fees:* In addition to the above, other fees that can be charged include: parking fees, infirmary charges, barracks damage, parking citations, yearbook, lost library books, library book late fees, rifle repair, and other fees directed by college officials.

### Refunds

The Citadel is committed to many expenses based upon the anticipated enrollment of a student at the beginning of each semester. Registration at The Citadel is considered to be a contract binding students and their parents or guardians to charges for the entire semester.

However, students who withdraw during a semester may receive partial refunds based on the length of attendance. Refunds will be computed from the required reporting date until the withdrawal date as determined by the Registrar. No refunds will be made for less than \$1.00.

In the event that a cadet receives a Medical Discharge, any refund due the cadet will follow the normal refund schedule policy as promulgated by the Vice President for Finance and Business Affairs. In the event that the Medical Discharge is a direct consequence of an injury received during The Citadel training program, the cadet may request an adjustment to this policy. The Campus Assessment Team (CAT) will make the final decision on all such requests. Authorized refunds are as follows:

*The school is not subject to any State or Accrediting Agency refund policy.*

The refund schedule can be found on the Treasurer's Office web page: <http://www.citadel.edu/root/treasurer>.

*Deposits for Uniforms, Books, Supplies, and Accessories - OneCard Restricted Account:*

Any unused portion of the deposit to the student's account for uniforms, books, supplies, and accessories will be refunded within 30 days of graduation or discharge.

## Financial Aid & Scholarships

The Office of Financial Aid & Scholarships administers student loan applications, grants, scholarships and work-study programs.

### Forms and Deadlines

To apply for financial aid at The Citadel and to best demonstrate eligibility for need-based scholarships, all students should file a *Free Application for Federal Student Aid* (FAFSA) as soon as possible after October 1 of each year. These forms are available online at <http://FAFSA.ed.gov>. The Office of Financial Aid and Scholarships may request additional information. Students are responsible for checking their e-mail account, online Citadel financial aid account, completing all requested paperwork, and submitting financial aid requirements in a timely manner. Funds are limited, so late applications are considered for aid only if resources are available.

Priority deadline dates are as follows:

Academic year (fall and spring)	February 28
Fall only	February 28
Spring only	October 15
Summer	April 15

Applicants who have not completed all financial aid paperwork by June 30 should not expect to receive notification of awards prior to the beginning of fall semester. These applicants should be prepared to pay for their tuition, fees, and other costs at the established fee payment deadlines. Students will be reimbursed if they are subsequently determined to be eligible for financial aid.

### Determining Financial Need

The amount of financial aid is determined based on the FAFSA form the applicant files after October each year. This form solicits information about the applicant's family's current financial situation and produces an "expected family contribution" (EFC). Adjusted gross income data from tax forms is used along with current asset information to determine family resources. Allowances are made for federal and state taxes, social security, employment (when both parents work), unusual medical and dental expenses, and family size. Other factors considered are any unusual expenses and the number of family members in college. In its simplest definition,

financial need is the difference between the cost to attend college and the expected family contribution, as determined by the need analysis. If costs exceed the amount of family contribution, then the applicant has “demonstrated” financial need.

### **Dependent or Independent Status**

Federal student aid programs are based on the premise that parents have the primary responsibility of financing their dependent children’s education. However, independent students are not required to submit parental data. Students who fall into at least one of the following categories are automatically considered independent:

- a. 24 years old or older by December 31 of the award year,
- b. Master’s or doctorate student,
- c. Married,
- d. Have children and provide more than half of their support,
- e. Have legal dependents (other than a spouse),
- f. Dependent or ward of the court or were in foster care or both parents were deceased since turning age 13,
- g. On active duty in the U.S. Armed Forces for purposes other than training,
- h. Veteran of the U.S. Armed Forces,
- i. Homeless or at risk of being homeless, or
- j. Is/was an emancipated minor.

### **Federal Eligibility Requirements**

Any student who is accepted for admission is eligible to request financial assistance. However, there are several general eligibility requirements a student must meet to receive federal financial aid:

- a. A student must be admitted to The Citadel as a regular or provisional student,
- b. A student must be a U.S. citizen or a national or permanent resident,
- c. A student may not receive aid if he or she is in default on any federal student loan program with any institution,
- d. Generally, a student must be enrolled at least half-time. This is defined as 4.5 hours/semester for graduate students and 6 hours/semester for undergraduate students,
- e. A student may not receive aid if he or she owes a repayment on a Pell Grant, Supplemental Grant, or state Student Incentive Grant at any institution,
- f. A student must have the minimum grade point ratio and must make satisfactory academic progress (SAP) toward a degree to continue to receive federal financial aid.

## **Types of Financial Aid**

### **Grants**

#### ***Federal Pell Grant***

The Federal Pell Grant program provides federal grants for eligible undergraduate students. Eligibility is determined by the Free Application for Federal Student Aid (FAFSA) using a nationally mandated formula applied uniformly to all applicants. Students must demonstrate satisfactory progress toward a degree each year to receive a Pell Grant in the next academic term. The Citadel participates in the Department of Education’s Electronic Data Exchange (EDE) program, which provides the student and the institution with faster processing of applications. When a student completes the FAFSA, the eligibility for a Federal Pell Grant is determined by the processor, and an electronic Student Aid Report (SAR) is available for applicants who provide a valid e-mail address. At the same time, an electronic ISIR is generated to the school. If corrections need to be made on the application, the institution can send the corrections electronically and have the results within four business days.

#### ***Federal Supplemental Educational Opportunity Grant (SEOG)***

The SEOG program provides aid to students who qualify for Pell Grants and who show exceptional financial need. These grants range in value from \$300 to \$4,000 per academic year, with the average award being \$1,000.

#### ***South Carolina Need-Based Grant***

South Carolina Need-Based Grants are awarded to South Carolina residents, on a first-come basis, who demonstrate financial need. A student may receive up to \$2,500 annually for full time status and up to \$1,250 annually for part-time status. Visit the South Carolina Commission on Higher Education web site for eligibility requirements.

#### ***Athletic Grants-in-Aid***

These grants are awarded to qualified students selected by members of the coaching staff. Additional information may be obtained by writing to the Director of Athletics.

### **Work Programs**

#### ***The Federal Work-Study Program***

This federally funded program provides part-time employment to qualifying students. Students are paid on an hourly basis, not less than the federal minimum wage. Paychecks are issued twice a month directly to students for hours worked. The Human Resources Office makes assignments after a student has qualified for work-study.

### ***The Institutional Work Program***

This non-federally funded program makes a variety of student jobs available in academic and administrative offices on campus. A student does not need to demonstrate financial need. Inquiries and applications are made in the Human Resources office.

### **Loans**

#### ***The Federal Direct Loan Program***

The Federal Direct Loan Program provides students with long-term, low interest subsidized and unsubsidized loans. The federal government pays the interest of the subsidized loan while the student is enrolled in school, whereas the interest accrues on the unsubsidized loan. The FAFSA contribution is taken into consideration when determining eligibility for any subsidized student loans. The maximum loan amount for a combination of subsidized and unsubsidized loans is \$5,500 for a first year student; \$6,500 for a second year student; and \$7,500 for remaining years of study. During their academic careers, undergraduate dependent students may borrow up to a maximum of \$31,000 (only \$23,000 can be subsidized). Independent undergraduate students may borrow up to a maximum of \$57,500 (only \$23,000 can be subsidized). The interest rates are set each year. Please check current rates online at [citadel.edu/finaid](http://citadel.edu/finaid). Repayment begins six months after the student graduates or after enrollment drops below half-time status.

#### ***The Federal Direct Parent Loan for Undergraduate Students (PLUS)***

Under the Federal Direct PLUS program, parents of dependent undergraduate students may borrow annually up to the difference between the student's cost of attendance and the estimated amount of financial assistance for each dependent student. There is no aggregate maximum under this program. The interest rate is set each year. Please check current rates online at [citadel.edu/finaid](http://citadel.edu/finaid). Repayment begins 60 days after the final disbursement or can be deferred while the student is enrolled at least half-time.

#### ***South Carolina Teacher Loan Program***

This South Carolina Teacher Loan Program is intended to attract and maintain the residency of talented teachers through the offer of student loan cancellation. Loan recipients who become certified to teach in critical need subject areas or who choose to teach in a designated school district will have their loans cancelled up to 100% at the rate of 20% for each full year of teaching. To qualify for this program, students must be South Carolina residents who attend college for the purpose of becoming a certified teacher. Employment must be in the state's public school system in an area of critical need as defined by the State Board of Education. Loan recipients who fail to become certified or who do not teach in a critical need area must repay the entire amount of the loan plus interest. Funds are limited; the priority filing deadline is April 30.

### **Scholars Programs**

**The Citadel Honors Program** is the college's premier program for intellectually and academically gifted students who demonstrate a love of learning and wish to participate in rich intellectual discourse over their four-year college career. Special benefits of the program include an honors curriculum of small classes, discussion-style instruction, regularly-scheduled one-on-one tutorials with honors program faculty, and comprehensive pre-professional counseling which includes research, writing, discussion, and planning regarding post-graduate goals, whether that's finding a job, applying to graduate or professional school, or competing for a national-level post-graduate scholarship or fellowship. A special notation will appear on the transcript of Honors Program graduates, and a distinctive gold seal will be attached to The Citadel diploma in recognition of this significant accomplishment.

A \$10,000 annual scholarship will be awarded to all participants in The Citadel Honors Program. All applicants will be considered for one of The Citadel's full scholarships. An interview and separate application are required: [citadel.edu/honors](http://citadel.edu/honors).

**The Business Scholars Program** is an exciting opportunity for talented students who are interested in business management, sales, supply-chain management and logistics, entrepreneurship, operations, accounting, finance, and related fields. Business Scholars will receive special benefits to aid in their educational and career development, such as unique networking opportunities, study abroad activities, scholarships, and counseling/guidance to obtain internships and jobs. The Business Mentor Association will provide a personal coach and counselor to assist in career planning and visioning. Business Scholars will work as members of a specialized cohort with opportunities for individually-tailored independent studies, experiential learning, and interactions with key area business organizations.

**The Teaching Scholars Program** is a selective program for academically talented students of excellent moral character who wish to pursue a career in teaching. Preference will be given to those who desire to teach in South Carolina public schools, but those who wish to teach in other locations or settings or who will accept a military commission upon graduation are also eligible. Teaching Scholars will receive special benefits to help in their educational and career development, such as volunteer/service activities in P-12 schools and other youth-serving agencies, study abroad opportunities, mentorship, networking opportunities, and assistance in obtaining internships and jobs.

**The Intelligence Scholars Program** is an innovative program for gifted students who have a strong interest in cybersecurity and national security affairs. Students selected as scholars will be recognized as members of an elite cohort whose skills and motivation make them prime candidates for post-graduate careers and opportunities. In addition, scholars will receive special benefits to help in their educa-

tional and career development, such as special enrichment activities and training, mentorship from private or government professionals in the field, faculty-guided research, study abroad activities, scholarships, and counseling/guidance to obtain internships and jobs.

**The Leadership Scholars Program** is an elite program for students who have the disposition and interest to develop themselves as effective and ethical leaders, leveraging The Citadel's national recognition for leadership development in all walks of life. Leadership Scholars will complete a minor in Leadership and benefit from leadership development programs; educational and career development activities, such as mentorship from leaders in business, government, and the military; study abroad activities; networking with fellow scholars and community leaders; social events; scholarships; and counseling/guidance to obtain internships and jobs or prepare for graduate school.

**The STEM Scholars Program** is an innovative cohort-based program for students with special interest and aptitude in science, technology, engineering, or mathematics. STEM Scholars will pursue a bachelor's degree in either the School of Engineering or School of Science and Mathematics. In addition, STEM Scholars will receive special benefits to enhance their educational and career development, such as professional mentorship, STEM-related community service opportunities, faculty-guided research, study abroad activities, scholarships, and counseling/guidance to obtain internships and jobs or prepare for graduate school.

To indicate your interest in becoming a part of a scholars program, visit [citadel.edu/scholars](http://citadel.edu/scholars). If you are ready to apply to The Citadel, visit [citadel.edu/apply](http://citadel.edu/apply) and indicate your interest in a scholars program within your application.

### **Awards**

Most incoming freshman scholarship recipients will be notified of their standing by April 30th. All scholarships must be applied for on an annual basis, except for full academic scholarships and scholarships for which the deeds of trust specify multi-year awards.

### **External Scholarships**

Numerous corporations, employers, professional organizations, foundations, local civic organizations, churches, and high schools make scholarships available to Citadel cadets. Outside scholarship assistance has been a rapidly growing source of financial aid at The Citadel. Students should consult high school counselors, employers, civic leaders or public officials and use the local library to obtain information on educational foundations which offer scholarships. Palmetto Fellows, LIFE, and HOPE Scholarships are available to residents of South Carolina. Complete information concerning these state programs can be found on the website

for the South Carolina Commission on Higher Education.

### **ROTC Scholarships**

ROTC Scholarships provide significant financial assistance to Citadel students. The Army, Navy, or Air Force each has its own criteria and time tables for application and acceptance. SAT or ACT scores should be submitted to the respective service usually by December during the senior year of high school. Enrolled Citadel students can also apply for two- or three-year ROTC Army and Navy scholarships that cover all tuition costs and academic fees, but do not pay the room and board and book and supplies components of the bill. Air Force ROTC scholarships pay according to the type of contract awarded. Every ROTC scholarship student also receives a monthly stipend that could be used to offset the cost of books. Nearly 10% of the Corps of Cadets hold ROTC scholarships. Students interested in ROTC scholarships should contact the head of the appropriate Citadel ROTC unit for additional information and application assistance.

### **Other Assistance**

**Vocational Rehabilitation Scholarships:** This program provides for education and training if the student has a physical or mental disability which is a substantial handicap to employment and if there exists reasonable expectation that vocational rehabilitation services may lead to gainful employment. Additional information is available through the Department of Vocational Rehabilitation in the student's home state.

**Veterans Benefits:** Veterans benefits are administered under the umbrella of student financial aid at The Citadel. Veterans benefits are intended to meet the needs of students receiving benefits under the following programs:

- Ch. 30 - Montgomery GI Bill—Active Duty, Veterans
- Ch. 31 - Vocational Rehabilitation
- Ch. 35 - Dependents' Educational Assistance Program
- Ch. 33 - Post 9/11 G.I. Bill
- Ch. 1606 - Montgomery GI Bill—Selected Reserve

Veterans who believe they have an entitlement should check with their local VA Office, the regional office in Columbia (1-800-827-1000), or the VA Benefits Coordinator at The Citadel. An applicant should contact the VA Benefits Coordinator at The Citadel well in advance of the anticipated matriculation date so that the necessary documents may be obtained in order to certify attendance with the VA. All veterans and dependents receiving VA Educational Benefits are required to complete an on-line Request for VA Enrollment Certification. Any changes in a veteran's course of study should be cleared with the VA Benefits Coordinator to ensure continuation of benefits. Any reduction in course load should be reported immediately to avoid overpayment. Transfer students are reminded that the office must have copies of all transcript evaluations made by the Registrar's Office before



certification can be made to the Veterans' Administration for payment.

### **Satisfactory Academic Progress**

In compliance with regulations governing federal and/or state financial aid programs, The Citadel is required to monitor each student to be certain that he or she is maintaining Satisfactory Academic Progress (SAP) in his or her course of study. SAP standards are separate from The Citadel's academic policies and are reviewed annually at the end of each spring semester.

### **How the Policy Works**

Students who fail to meet published SAP standards will be ineligible to receive federal or state financial aid funds. However, those students failing to meet the minimum standards, as prescribed in this policy, may appeal their status by following outlined conditions.

### **Academic Year**

The academic year for SAP determination is comprised of the fall, spring, and summer terms.

### **Minimum Standards**

Unsatisfactory academic progress is defined as a failure to meet any of the following standards:

#### **Undergraduate Students**

1. Academic Progression
  - a. Full-time students (enrolled in at least 12 hours/semester) must earn 24 credit hours in an academic year. Full-time students enrolled in one semester are considered to be meeting progression standards by earning at least 12 hours.
  - b. Part-time students (enrolled in less than 12 hours/semester) must earn at least 66% of the credit hours attempted in an academic year.
2. GPA - A student's GPA must meet the required minimum for their grade level according to The Citadel's academic policies for continuance.
  - a. 1.3 with < 39 attempted hours
  - b. 1.5 with 40-69 attempted hours
  - c. 1.7 with 70-99 attempted hours
  - d. 2.0 with > 99 attempted hours
3. Attempted credit hours cannot exceed 207 hours (more than 150% of program length).

#### **Graduate Students**

1. Academic Progression
  - a. Full-time students (enrolled in at least 9 hours/semester) must earn 18 credit hours in an academic year. Full-time students enrolled

in one semester are considered to be meeting progression standards by earning at least 9 hours.

- b. Part-time students (enrolled in less than 9 hours/semester) must earn at least 66% of the credit hours attempted in an academic year.
2. GPA - A student must earn at least a 3.0 grade point average.
3. Attempted credit hours cannot exceed 150% of the student's program length.

### **SAP Appeal**

Students who have not met SAP have the opportunity to complete an appeal to regain eligibility for federal aid. Completion of this process does not guarantee reinstatement of federal financial aid. Students are responsible for full payment of tuition/fees regardless of financial aid status. It is also the student's responsibility to be aware of and to meet all fee payment and financial aid deadlines.

The **SAP Appeal Packet** is available on the Office of Financial Aid & Scholarship's webpage at [citadel.edu](http://citadel.edu).

### **The SAP Appeal must include:**

1. A completed SAP Appeal Form and Academic Improvement Plan approved by the Academic Support Center and signed by both the advisor and the student, and
2. A letter written by the student that defines why the student failed to make SAP and what has changed that enables the student to meet SAP at the next evaluation.

If a student fails to either regain regular SAP eligibility after one semester or meet the conditions of the Academic Improvement Plan, the student is ineligible to receive federal financial aid (Title IV aid).

### **Appeal Deadlines**

Completed appeal forms must be turned in two weeks before the end of the term for which the appeal is filed.

### **Grades**

Only letter grades are given to evaluate a student's progress. The following definitions of letter grades are applicable:

- "A" Superior
- "B" Very Good

- “C” Satisfactory; Acceptable
- “D” Marginal; Passing
- “F” Unsatisfactory
- “P” Grade assigned in pass/fail courses that do not carry credit hours to designate passing performance.
- “S” Grade assigned in pass/fail courses that carry credit hours to designate that a grade of “A”, “B” or “C” has been earned and credit has been awarded.
- “U” Grade assigned in pass/fail courses and in ENGL 101 to designate that a grade of “D” or “F” has been earned and no credit has been awarded.
- “W” Withdrawal from a course prior to the official deadline.
- “I” An Incomplete is awarded when course requirements have been very nearly met but for authorized reasons (illness, injury, family emergency, etc.) cannot be completed during the current semester.
- “IP” Grade assigned for courses in which requirements are not expected to be met in one academic term. The grade of “IP” must be removed in the next full semester, or the “IP” becomes an “F.” The summer session will not be considered a semester in this case. Under extenuating circumstances, an extension may be awarded by the Associate Provost for Academic Affairs with the recommendation of the instructor. The removal of the “IP” is the responsibility of the student. Students may not enroll in a course in which they currently have an “IP.”

Students who are enrolled in audit courses will not receive financial aid for these courses.

Students can access midterm progress and semester grade reports online by using BANNER Self-Service through the Lesesne Gateway portal.

### **Taking or Repeating Courses to Improve the GPA/Grade Replacement**

The regulatory definition for full-time enrollment status (for undergraduates) has been revised to allow a student to retake (one time only per previously passed course) any previously passed course. For this purpose, passed means any grade higher than an “F”, regardless of any school or program policy requiring a higher qualitative grade or measure to have been considered to have passed the course. This retaken class may be counted towards a student’s enrollment status, and the student may be awarded Title IV aid for the enrollment status based on inclusion of the class. A student may be repeatedly paid for repeatedly failing the same course (normal SAP policy still applies to such cases), and if a student withdraws before

completing the course that he or she is being paid Title IV funds for retaking, then that is not counted as his or her one allowed retake for that course. However, if a student passed a class once, then is repaid for retaking it, and fails the second time, that failure counts as their paid retake, and the student may not be paid for retaking the class a third time.

### **Transfer Credits**

When evaluating SAP, a student’s transfer credits, accepted by The Citadel toward completion of the student’s degree program, will count as both credit hours attempted and hours earned.

### **Change of Major**

Students who have changed majors and earn more than the maximum allowable number of credit hours toward graduation will be required to submit a SAP Appeal.

### **Second Degrees**

Students who are completing a second degree will be required to submit a SAP Appeal to explain the reason behind earning more than 150% of allowable credit hours.

### **Financial Aid Funds Covered by SAP Standards**

- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant (SEOG)
- Federal Work Study
- Federal Direct Loan, subsidized and unsubsidized
- Federal Direct PLUS Loan
- South Carolina Teachers Loan
- South Carolina Palmetto Fellows Scholarship
- South Carolina LIFE Scholarship
- South Carolina Need-Based Grant
- Other federal/state programs as required
- Some Private Educational Loans (as required by the lender)

### **Financial Aid Refund and Repayment Policy**

#### **Refunds**

The Higher Education Act of 1998, Public Law 105-244, substantially changed the way funds paid toward a student’s education are managed should the student, as a recipient of federal financial aid, withdraw from school. If a student who was awarded financial aid withdraws from school, he/she is eligible for the “institu-

tionally-determined-refund” that remains after the immediate repayment of the financial aid award to the Office of Financial Aid & Scholarships (please see the Expenses Section of this catalog). This policy also applies to students on whose behalf a parent has borrowed a Title IV loan. Refunds are returned to the programs that awarded the student aid. In the case of federal funds, a statutory schedule is used to determine the amount of Federal Financial Aid that has been earned based on the period the student was in attendance. Up through the 60% point, in each payment period of enrollment, a pro rata schedule is used to determine how much Federal Financial Aid the student will receive. After the 60% point in the payment period of enrollment, a student has earned 100% of the federal funds awarded for the period.

The percentage earned will be calculated based on the following schedule:

Week 1	6 percent	Week 7	43 percent
Week 2	12 percent	Week 8	50 percent
Week 3	18 percent	Week 9	56 percent
Week 4	25 percent	Week 10	60 percent
Week 5	31 percent	Week 11-16	100 percent
Week 6	37 percent		

For example, if a student has received \$1,000 in Federal Financial Aid and withdraws within the first week of classes, that student will receive 6 percent (\$60) of the aid award applied to total charges. The remaining \$940 will be returned to the Federal Financial Aid programs in the following order:

- Unsubsidized Student Loans
- Subsidized Student Loans
- Perkins Loans
- PLUS Loans
- Federal Pell Grants
- Federal SEOG Grants
- Other Assistance under Title IV

The refund and repayment provisions mandated by the Federal government for Federal Aid Recipients apply when a student receives financial aid funds and withdraws, drops out, takes an unapproved leave of absence, fails to return from an approved leave of absence, is expelled, or otherwise fails to complete the period of enrollment for which he or she was charged. The refund and repayment requirements DO NOT APPLY to a student who:

- Withdraws, drops out, or is expelled before his or her first day

of class, or

- Withdraws from some classes, but continues to be enrolled in other classes, or
- Does not receive funds for the period in question. (Students whose parents received a PLUS Loan are considered to have received funds and fall under the stated refund and repayment requirements.)

### **Repayments**

If a student’s non-instructional educational expenses (allowances as prescribed below) incurred up to the time of withdrawal exceed the amount of cash disbursement, the student does not owe a repayment. If cash disbursed exceeds the non-instructional costs of education incurred up to the time of withdrawal, the student does owe a repayment. This repayment is the difference between costs incurred and the actual cash refund received. Non-instructional expenses are determined by calculating the percentage of room, board, books, supplies, travel, and personal expenses incurred during the portion of the term a student is enrolled. Off-campus board and personal expenses are prorated on a weekly basis. There is no proration of on-campus room charges. A percentage of books, supplies, and travel costs is allowed based on length of enrollment.

### **Student aid accounts to be refunded and repaid**

Once the amounts to be refunded and/or repaid are determined, the aid programs from which the student received funds will be reimbursed in the following order:

- Federal Direct/Stafford loans
- Federal PLUS loans received on behalf of the student
- Federal Perkins loans
- Federal Pell Grants
- Federal SEOG Grants
- Other Title IV programs
- Federal, state, private, or institutional student financial assistance received by the student for which refunds are required
- The student

## Department of Intercollegiate Athletics

The mission of the Department of Intercollegiate Athletics at The Citadel is to develop, maintain, and continue to improve a well-rounded program of athletics geared to the aims and objectives of The Citadel, the Southern Conference, and the National Collegiate Athletic Association. In order to carry out this mission, all athletics personnel must be familiar with the athletics policy as approved by the Board of Visitors and the President of The Citadel:

The Citadel policy on intercollegiate athletics includes a balanced program covering a broad spectrum of sports for men and women. The College will support this program to enable its representatives to be competitive in every respect. The Citadel will compete as a Division I institution under current NCAA and Southern Conference regulations. The athletics program will be conducted within the aims, standards and objectives of The Citadel as a comprehensive military college providing a quality education. The Department of Athletics is committed to gender and minority equity in all of its programs. In addition, for the safety and welfare of student-athletes, The Citadel maintains full-time certified trainers, a college surgeon, and special orthopedic doctors to provide medical support services.

The Citadel is a member of the NCAA with Football Championship Subdivision classification and Division I classification in all other sports. In addition, the college is a member of the Southern Conference, which is comprised of The Citadel, East Tennessee State University, Furman University, Mercer University, UNC-Greensboro, Samford University, University of Tennessee at Chattanooga, Virginia Military Institute, Western Carolina University, and Wofford College.

### The Sports Program

The Citadel Department of Intercollegiate Athletics sponsors 16 varsity teams including football, basketball, cross country, wrestling, indoor and outdoor track, baseball, rifle, and tennis for men; and golf, soccer, volleyball, rifle, cross country, and indoor and outdoor track for women. Each year, nearly 400 cadets participate as players, managers, or student trainers.

The Citadel's intercollegiate teams are led by qualified coaches who are concerned with the overall development of the cadet-athlete. The graduation rate of Citadel athletes always ranks among the best of the Southern Conference.

### Facilities

Athletic facilities at The Citadel are among the finest in the Southern Conference. Home football games are played in historic Johnson Hagood Stadium,

a 21,000-seat facility built in 1948. The Bulldogs celebrated the re-opening of the West Stands at Johnson Hagood Stadium for the 2006 season, and in 2008, the West Side Tower opened its doors to The Citadel Family. The completed project features luxury suites, club seats, a state-of-the-art press box and all the expected amenities of a modern-day facility. The field was named Sansom Field in 2008, commemorating the loyalty and generosity of distinguished and active alumnus, William B. Sansom, '64. In the fall of 2001, the Altman Athletic Center opened. Located in the south end zone, the Center houses home and visitors' locker rooms, officials' rooms, and an entertainment area for The Citadel Brigadier Foundation.

McAlister Field House, which houses the Athletic Department staff and several coaches' offices, was built in 1939 and renovated in 1989, and a new floor was installed in 2016 due to the generosity of Jimmy and Mary Reed. Seating 6,000 for Bulldog basketball games, McAlister Field House also serves as home of the volleyball and wrestling teams as well as the site for graduations, concerts and a variety of other events. Additional locker rooms have also been added to the Field House. In the summer of 2011, due in large part to private donations, The Citadel basketball program completed an overhaul of the basketball locker room.

Next to McAlister Field House is Vandiver Hall which opened in 1991 and provides the Bulldog soccer, baseball, wrestling, golf, volleyball, cross-country and track and field teams with a modern and well-equipped facility. Dressing and locker rooms, a golf driving range, a wrestling room, and a baseball batting tunnel are a few of the features of Vandiver Hall.

Seignious Hall, which is located directly behind Vandiver Hall, houses the football coaches' offices and the football locker room. Also located in this facility are a spacious weight room, equipment room, and training room.

The Donald C. Bunch Courts at the Earle Tennis Center, which has often served as the site of the Southern Conference Men's and Women's Tennis Championships, receive a significant amount of play year-round. The women's soccer team utilizes WLI Field along the Ashley River while the track and field teams use a track surrounding the football team's Maybank Triplets Practice Facility at Willson Field.

In April 1997, The Citadel's baseball team moved into the new, state-of-the-art Joseph P. Riley, Jr. Park, located on the banks of the Ashley River. The 6,000-seat park, which has hosted the Southern Conference Baseball Championship on several occasions, features the Bulldog locker room, luxury suites, an indoor batting tunnel and a state-of-the-art video board. The Citadel utilizes nearby College Park as a practice site during the year.

The indoor rifle range, Inouye Marksmanship Center, opened in the fall of 2005. Located behind WLI Field along the Ashley River, this facility allows for general firearms training for the entire Corps of Cadets, enhanced ROTC firearms training, and increased opportunities for Rifle and Pistol Team practices.

## The Citadel Honors Program

The Citadel Honors Program provides exceptional learning experiences for outstanding students whose past records indicate that they can take full advantage of the personal student-teacher relationship which the tutorial-based honors curricula will provide. Honors courses will augment the current curriculum of the college by offering for those selected students an experimental and alternate means of education grounded in the methods of intellectual inquiry.

The Honors Program is an autonomous program of the college, with an Honors Director serving as the head of the program. The Director is responsible for recruiting and admitting Honors students, reviewing courses which are proposed to meet Honors requirements and selecting those which will be included in Program offerings, critiquing Honors courses and the performance of the faculty offering them, establishing and enforcing entrance and exit requirements, serving as the Honors Advisor for all Honors students, establishing and monitoring the operating budget for the Honors Program, and coordinating the Honors Program requirements with those of the academic majors.

The Honors Council is comprised of members of the faculty who have taught Honors courses the previous semester. The Honors Council will advise and assist the Honors Director in the governance of the program.

The Honors Students' Association is comprised of academically proficient participants or past participants in the Honors Program. Its purpose is to promote closer association among participants in the Honors Program, to provide a student forum for discussion of the Honors Program and its operation, and to assist the Honors Council.

### Admission and Retention of Students

Students must apply separately for admission to the Honors Program, in addition to applying for admission to the college. The Honors Director will evaluate all applications and offer acceptances based upon the student's standardized test scores, class rank, extracurricular activities, and intellectual and academic promise. Personal interviews, at least by telephone, are required as part of the application process. Applications are available online at [www.citadel.edu/honors](http://www.citadel.edu/honors). The suggested deadline for applying is January 15.

Students with outstanding grades after their first semester at The Citadel may apply for admission to the Honors Program at that time. Also, deserving students may be admitted to individual Honors courses on a space-available basis; in such cases, the Honors courses will meet Core Curriculum or General Elective requirements as appropriate.

To remain in good standing, students in the Honors Program must maintain

at least a 3.0 in their Honors courses and a 3.0 overall. The Honors Council will review the records of all Honors students who fall below this average and take appropriate action, which might be either separation from the Honors Program or the establishment of a probationary period.

### Honors Student Advisors

One faculty member in each academic department serves as academic advisor to all the Honors Program students majoring in that discipline. In addition, the Honors Director helps advise students concerning their schedules, courses of study, and other matters as needed.

### Honors Program Curriculum

The Honors Program is designed to provide an exceptionally broad background of cultural knowledge and learning skills which students can then apply to their chosen areas of academic specialization. Most of the Honors Program curriculum will come in courses designed to be taken in lieu of Core Curriculum requirements, and most will, therefore, be taken in the freshman and sophomore years. The other Honors courses will take the place of General Electives. The emphasis in Honors courses will be not primarily acceleration, but enrichment. The courses will go into extra depth, examining more closely the significance and implications of the material studied or presenting that material in a broader cultural context. In general, it is expected that Honors courses will employ discussion in order to establish habits of rigorous inquiry and intellectual independence.

The plan behind the curriculum is to create an environment of learning in which the students' intellectual habits can be formed. The patterns and processes of intellectual and scholarly inquiry will be taught, not merely the results of other people's having conducted that inquiry. Each Honors course will have a tutorial foundation; individual students will meet with their instructors frequently (usually, once every week) to discuss and develop ongoing writing, research, and laboratory projects.

### Curricular Requirements

Students majoring in one of the sciences or engineering will be required to complete all of the following Honors courses: HONR 211/212/311/312/411/412: Honors Personal and Professional Development Ia, Ib, IIa, IIb, IIIa and IIIB; HONR 101/102/201/202: Honors English I, II, III, and IV; HONR 103/104: Honors History I and II; and, HONR 131/132: Honors Mathematics I and II. In addition, they will be required to complete one of the following courses: HONR 203: Honors Social Science; HONR 300: Honors Seminar; or, HONR 400: Honors Directed Research Project. (Pre-med students will follow the social sciences requirements below.)

Students majoring in one of the liberal arts or social sciences will be

required to complete all of the following Honors courses: HONR 211/212/311/312/411/412: Honors Personal and Professional Development Ia, Ib, IIa, IIb, IIIa and IIIb; HONR 101/102/201/202: Honors English I, II, III, and IV; HONR 103/104: Honors History I and II; and, HONR 203: Honors Social Science. In addition, they will be required to complete six hours of upper-level Honors courses, in one of these combinations: a. Two HONR 300: Honors Seminars; b. Two HONR 400: Honors Directed Research Projects; or, c. One HONR 300: Honors Seminar and one HONR 400: Honors Directed Research Project.

While students are highly encouraged to participate in study away opportunities, at least half of the required Honors courses must be completed at The Citadel.

### Freshman Honors Courses

HONR 101 and 102     *Honors English I & II:  
The Aesthetic Context*     Three Credit Hours  
Each Semester

This sequence will introduce students to the artistic achievements, chiefly literary, of Western and possibly some non-Western cultures, within the context of the major intellectual and ideological currents of those cultures. Techniques of prose composition will be taught as the students engage these issues in writing.

Students enrolled in the Honors Program may meet the college's Core Curriculum requirements in freshman English by successfully completing HONR 101 and 102 ("Honors English: The Aesthetic Context") in lieu of ENGL 101 and 102 ("Composition and Literature"). Students who successfully complete the first semester of freshman Honors English and then cease to participate in the Honors Program can fulfill the Core Curriculum requirement in English by completing ENGL 102.

HONR 103 and 104     *Honors History I & II:  
The Social, Political,  
and Historical Context*     Three Credit Hours  
Each Semester

This sequence will introduce students to the social, political, and historical events involved in the development of Western and possibly some non-Western cultures, emphasizing the interplay between the way people of the past saw themselves and the universe and the way they shaped their environment.

Students enrolled in the Honors Program may meet the college's Core Curriculum requirement in history by successfully completing HONR 103 and 104 ("Honors History: The Social, Political, and Historical Context") in lieu of HIST 103 and 104 ("History of Western Civilization"). If a student successfully completes the first semester of Honors History and then ceases participation in

the Honors Program, the student may complete the Core Curriculum requirement in history by completing HIST 104 (the second semester of "History of Western Civilization").

HONR 131 and 132     *Honors Mathematics I and II:  
The Analytic Context*     Four Credit Hours  
Each Semester

Prerequisite for HONR 131: B or higher in MATH 119; 3 or higher on the AP Calculus exam; by placing in through The Citadel's Mathematics Placement Exam; by transfer credit for MATH 131 from another college; or by permission of the Chair of the Department of Mathematics and Computer Science.

Prerequisite for HONR 132: C or higher in HONR 131; B or higher in MATH 131.

This sequence will teach the calculus within the context of its development from the civilization which produced it and its impact on civilization since. Topics covered will closely match those in MATH 131 and MATH 132. Students enrolled in the Honors Program may meet the Core Curriculum requirement in mathematics by successfully completing HONR 131/132 ("Honors Mathematics: The Analytic Context") in lieu of MATH 131/32, MATH 104/105, MATH 104/106, MATH 105/106, or MATH 106/107. Students who successfully complete the first semester of Honors Mathematics and then cease to participate in the Honors Program can fulfill the Core Curriculum requirement in mathematics by completing MATH 105, MATH 107, or MATH 132.

### Sophomore Honors Courses

HONR 201 and 202     *Honors English III & IV:  
Studies in British and  
American Literature*     Three Credit Hours  
Each Semester

This sequence will teach one or more themes, genres, modes, schools, periods, or authors in British and American literature. The techniques of prose composition will be reinforced and developed.

Two sections of sophomore Honors English with different course topics are taught each semester. Thus, a student can fulfill the Core Curriculum requirement for sophomore English in three ways: 1) HONR 201 and HONR 202; 2) two differing sections of HONR 201; or, 3) two differing sections of HONR 202. Thus, students enrolled in the Honors Program may meet the college's Core Curriculum requirement in sophomore English by successfully completing two different 3-hour courses of HONR 201 or 202 in lieu of ENGL 201 and either ENGL 202, 215, 218, or 219. Students who successfully complete the first semester of sophomore Honors English and then cease participation in the Honors Program will be allowed to enroll in ENGL 202, 215, 218, or 219 and may fulfill the sophomore Core Curriculum requirement in English by successfully completing that course.

HONR 203 *Honors Social Science Project* Three Credit Hours  
 This introduction to the social sciences will incorporate an integrative project in the social sciences. Students may meet the college's Core Curriculum Social Science requirement by completing this one semester course.

### Upper-Level Honors Courses

HONR 300 *Honors Seminar: Special Topics* Three Credit Hours  
 Often interdisciplinary, this seminar will investigate a field of study not directly addressed within the framework of the normal curriculum. It will be suitable for students in all majors. Topics will vary.

HONR 400/401 *Honors Directed Research Project I & II* Three Credit Hours Each Semester  
 Students conduct research under the direction of faculty members. The research need not be original with the student but may be part of a project which the faculty member is currently conducting or has conducted in the past. An extra-departmental second reader or evaluator will be required for all projects.

### Multilevel Honors Courses

HONR 211, 212, 311, 312, 411, and 412  
*Honors Personal and Professional Development Ia, Ib, IIa, IIb, IIIa & IIIb* Three Credit Hours PASS/FAIL

Taught entirely in tutorial, this sequence directs students in a three-year program of research, writing, and discussion on the subject of their professional goals, encouraging them to envision their leadership in their future profession and guiding them in exploring through research and writing the ideals as well as the practices of that profession. One credit hour (PASS/FAIL) be granted upon the completion of both 211a and 211b. An additional one credit hour (PASS/FAIL) will be granted upon the completion of both 311a and 311b. A final one credit hour (PASS/FAIL) will be granted upon the completion of both 411a and 411b. This entire three-year series must be completed to fulfill the requirements of the Honors Program.

### Honors Program Recognition

Students who complete all Honors Program requirements will be recognized as Honors Program graduates in their college commencement ceremony. They will receive an Honors Program certificate plus an Honors Seal on their Citadel diploma. A notation will be added to their official college transcript to indicate they have completed the requirements of the Honors Program.

Students admitted to the Honors Program after their first semester at The Citadel will be required to complete at least 18 semester hours of Honors courses, plus HONR 211, 212, 311, 312, 411, and 412. They will be recognized as Honors Program Graduates in their commencement ceremony, will receive an Honors Program certificate, and a notation will be added to their official college transcript to indicate that they have fulfilled the requirements of the Honors Program. Unlike Honors students who have completed the full program, they will not receive an Honors Seal on their diplomas.

## The Undergraduate Curriculum

The curriculum is the major instrument by which an institution whose purpose is to provide a broad-based education passes along to the rising generation the intellectual heritage of all people. This large treasury includes not only valuable knowledge acquired over the centuries, but also the modes of thought by which that knowledge has been acquired.

The curriculum provides an orderly sequence of academic achievements through courses which exhibit a solid body of subject matter and employ scholarly methods which are typical of their discipline and whose subject matter and methods are useful for understanding other academic matters beyond the confines of their own discipline. Such courses have been divided traditionally into two groups: the core curriculum, through which students are initiated into the methods and subjects of several academic disciplines that represent the full scope of academic study; and the academic major curriculum, through which students pursue intensive study in a single academic field.

Through this objective and intellectually rigorous method of education, The Citadel prepares not only professional scholars, but also principled leaders of society in all walks of life.

### LEADERSHIP 101: FIRST-YEAR SEMINAR

One Credit Hour

LDRS 101 provides the academic and life skills to help students make a successful transition to college as well as to the unique environment of The Citadel. Students will develop their academic skills (reading, listening, note taking, test taking, time management, research, etc.) and will be introduced to campus facilities, resources, and support services. Some attention will also be given to lifestyle and relationship issues.

A student must have the approval of the Associate Provost for Academic Affairs to withdraw from LDRS 101.

**LEADERSHIP 111: Freshman Ethical Fitness Seminar**

Zero Credit Hours

LDRS 111 is comprised of the Ethical Fitness® Seminar (EFS) designed to promote ethical culture. This seminar meets once a week and includes an ethics essay recorded in each cadet's E-Leadership Portfolio. The seminar is based on Dr. Rushworth Kidder's landmark book, *How Good People Make Tough Choices* and is delivered by Citadel faculty and staff who are trained, certified, and licensed by the Institute for Global Ethics. Topics include recognizing why ethics matters, understanding trust, tasking leadership with trust, defining ethical values, and analyzing and resolving ethical dilemmas. Completion of LDRS 111 is required of all freshmen and is a graduation requirement.

**LEADERSHIP 201: Sophomore Seminar in Principled Leadership**

One Credit Hour

Required of all second-year cadets, LDRS 201 focuses on the characteristics of principled leaders. The course assists cadets in the process of transitioning from the freshman year to the sophomore year and enables them to reflect upon their experiences with the Citadel's fourth-class system as they learn more about effective, ethical leadership. This course is a graded, one-hour course. A student must have permission of the Associate Provost for Academic Affairs to withdraw from LDRS 201.

**LEADERSHIP 211: Sophomore Seminar Service Learning Lab**

Zero Credit Hours

The Sophomore Seminar Service Learning Lab is a zero credit-hour course designed to provide sophomores with an approved Service Learning experience of approximately 10 hours (exact hours may vary depending on the service site cadets choose). The Pass/Fail lab component is offered in the fall, spring, or by professor consent in the summer. Both LDRS 201 (the graded one-hour Sophomore Seminar in Principled Leadership required in the second year) and LDRS 211 (the zero-hour pass/fail service lab required in the second year) must be completed for a student to fulfill the sophomore leadership course requirements for graduation.

**LEADERSHIP 311: Junior Ethics Enrichment Experience**

Zero Credit Hours

The *Junior Ethics Enrichment Experience* is comprised of a one-day Moral Courage™ Seminar designed to help cadets make morally courageous decisions. At the conclusion of the seminar, cadets will write a moral courage essay recorded in each cadet's *eLeadership Portfolio*. The seminar is based on Dr. Rushworth Kidder's landmark book, *Moral Courage: Taking Action When Your Values Are Put to the Test* and is delivered by Citadel faculty and staff who are trained, certified, and licensed by The Institute for Global Ethics. Topics include gaining insight into the nature of

moral courage, the tools to analyze the dangers, and ways to measure the capability to endure the dangers of making a morally courageous decision. Completion of the *Junior Ethics Enrichment Experience* is a graduation requirement. LDRS 201 is a prerequisite for LDRS 371.

**LEADERSHIP 411: Senior Leadership Integration Seminar**

Zero Credit Hours

The *Senior Leadership Integration Seminar* is a full-day professional development seminar during which cadets reflect upon their personal values and the leadership lessons learned at The Citadel. Cadets engage with business and community facilitators to discuss how they will apply their learning toward being effective principled leaders as they transition to the next phase of their lives. Finally, cadets consider their duty as Citadel graduates to leave positive legacies wherever they serve in the future. Written reflections and a personal vision statement completed after the seminar become part of each cadet's *eLeadership Portfolio*. Completion of the *Senior Leadership Integration Seminar* is a graduation requirement.

**The Core Curriculum**

The core curriculum is the body of courses which constitutes the center or nucleus of a Citadel education. The disciplines represented in the core are selected according to two standards: the rational, inasmuch as the courses encompass each of the basic methodologies employed in academic pursuits, and the historical, inasmuch as the centuries have confirmed the durability and the serviceability of the disciplines involved.

While the courses of the core are diverse, they, nevertheless, constitute a unit of the college curriculum, one that coalesces at a higher level of abstraction than other portions of the curriculum because the core courses examine the foundations of particular, central disciplines in the perspective of the whole academic enterprise, the search for truth. These courses, therefore, have a decidedly philosophical cast; and for this reason, they rightly emphasize the ultimate bases of the discipline, the validity of its method, its essential elements, and its distinctive character.

In the core curriculum, earlier education reaches a completeness and a fullness of perspective for which the student was not previously ready. The core curriculum also captures the academic quality of higher education better than most arrays of courses since through core courses, the student examines the forms which knowledge takes. Furthermore, the level of intellectual achievement in the core courses is for most students higher than they will ever reach again, except in the confines of the single discipline in which they major.

Since the core curriculum is fundamental to all further studies, the entire faculty shares authority over it, although some departments have special responsibility for the parts which they teach. The core curriculum is placed early in a student's career because it inculcates those skills essential for further study and for the life of an



educated person, such permanent and profound dispositions as the habits of objectivity, consistency, preciseness, orderly deliberation, prudent judgment, and passion for lifetime learning and intellectual growth. These intellectual powers are developed by students seriously abandoning themselves to mature study in the academic disciplines which constitute our core curriculum.

The Standing Core Curriculum Oversight Committee of the college is charged to monitor the overall appropriateness and effectiveness of the core curriculum courses, to study and determine the benefit accruing to students from these courses, to examine whether the purposes for which the core was designed are being realized, and to recommend changes and modifications within particular courses or with the overall core curriculum.

### General Education Student Learning Outcomes

**Written Communication Learning Outcome:** Student can effectively communicate ideas in a logical sequence, demonstrating control of syntax and mechanics and the ability to integrate credible and relevant sources.

**Quantitative Reasoning Learning Outcome:** Student can use quantitative reasoning skills to successfully make calculations, interpret data, communicate results, and evaluate an issue or solve a problem.

**Critical Thinking Learning Outcome:** Student can analyze complex issues that have varying positions and assumptions using information from credible sources. Student has the ability to state positions, create new positions, and acknowledge other positions including implications and consequences.

**Ethical Reasoning Learning Outcome:** Student can recognize ethical issues when presented in a complex, multilayered (gray) context, analyze cross-relationships among the issues, and evaluate ethical perspectives and concepts, including his or her own.

**Inquiry and Analysis Learning Outcome:** Student demonstrates skill in inquiry and analysis, including use of design process, synthesizing information from relevant sources, drawing conclusions, and recognizing implications and limitations.

**Intercultural Knowledge and Competence Learning Outcome:** Student demonstrates insight into own cultural rules and biases, accurate understanding of other cultural world views, attitudes including curiosity and openness, and skills such as perspective taking, empathy, and verbal and nonverbal communication skills.

### Areas of Study

Within the Citadel's core curriculum, study in five areas—English, history, mathematics, science, and social science—is required of all students regardless of their

academic majors. For all students other than those pursuing professional preparations in the areas of civil and electrical engineering, education, and the teaching track of physical education, study of a foreign language is also required. Each course, or sequence of courses, which addresses a core curriculum requirement incorporates, where appropriate, all the following skills: written communications, critical thinking, logical reasoning, and resource as well as reference usage. Students are expected to use proper grammar in all their coursework, whether written or oral. Proper usage is expected at the college level and is required by all professors.

**English:** The use of language is the most essential, the most sophisticated, and the most practical of all human arts and is a skill indispensable to further endeavors in any field. In the use of language and ideas, English studies require the student to assess great works of literature. This obliges students to become adept in handling the important values of civilization and also to become sensitive to the subtle nuances that great writers have found in them. Such studies also refine aesthetic sense and, thereby, teach, among other things, how to use language with appropriate grace and force. Literary studies contribute to the development of a student's character by requiring the student to evaluate human conduct and judge how people live their lives. English studies are central to a college education because they are a forum where the rival and complementary claims of philosophy, practicality, science, ethics, politics, and religion come alive in concrete situations.

The primary benefits in studying English come when a student engages in dialogues with the works of great authors, listening to their words receptively and responding to them critically. Prerequisite to this encounter are skills in writing and literary analysis.

Each student at The Citadel is required to complete four semesters of English. The first semester, ENGL 101, is basic composition, and the Department of English is responsible for determining which entering students are sufficiently prepared to exempt this course. The transcripts of those students who are permitted to exempt this course will reflect ENGL 101 as if it had been completed successfully on a Pass/Fail basis at The Citadel.

For students who participate in ENGL 101, successful completion will be based on acquired writing skills, and the course (graded on a scale of "A", "B", "C", "U") must be completed with the grade of "C" or higher.

It is expected that the second course in English, ENGL 102, will be exempted only by exceptionally well-prepared students. Should this circumstance occur, the transcript will reflect ENGL 102 as was described for ENGL 101 above. This course continues to develop the writing skills of the student, introduces the student to various literary forms, and prepares the student to undertake a two-semester literature sequence.

All students pursuing degrees in the School of Business, the Zucker Family School of Education, and the School of Humanities and Social Sciences must also take ENGL 201 (Major British Writers I) and one additional course from among ENGL

202 (Major British Writers II), ENGL 215 (Masterpieces of American Literature), ENGL 218 (Masterpieces of World Literature I), or ENGL 219 (Masterpieces of World Literature II). Students pursuing degrees in the School of Engineering are required to take COMM 260 (Technical Writing & Communication) and either ENGL 201, 202, 215, 218, or 219. Depending on their major, students in the School of Science and Mathematics may take either sequence - ENGL 201/201, 215, 218, or 219 or COMM 260/ENGL 201, 201, 215, 218, or 219. Honors Program participants may complete their English requirement by taking HONR 101/102 and HONR 201/202.

**Mathematics:** Much of mathematics deals with the study of number, form, arrangement, and associated relationships, using rigorously defined literal, numerical, and operational symbols. The mathematical world, then, is one of extraordinary purity and completeness, and the study of it provides a precision of thinking and a clarity of knowledge that could hardly be imagined without this unique discipline.

Mathematics is a product of human thought which does not depend on empirical observations, yet it is admirably adapted to concrete interpretations in the physical and social sciences. Its purely theoretical foundation confirms the objectivity of scientific findings, and its transferability to discrete sciences provides a bond of unity among them. Mathematics, then, comprises both abstraction and the application of the results obtained by abstraction to specific problems. Of these aspects, the basic one is abstraction. Because mathematics is abstract and general, it is applicable to problems which arise in widely different areas.

Core studies in mathematics are designed to enhance students' facility in mathematical operations, advance them as far into mathematics as their talent and preparation will permit, increase their understanding of mathematical applications in other fields, and reveal the nature of mathematics as a discipline in its own right.

Each student is required to complete a two-semester sequence in mathematics. Depending on the student's major, that sequence will be MATH 104/105, MATH 104/106, MATH 104/STAT 160, MATH 106/107, or MATH 131/132. The honors sequence, HONR 131/132, may be taken in lieu of any of these sequences. A student who chooses the sequence MATH 131/132 or HONR 131/132 is required to take the Math Placement Exam (MPE) given online by the Department of Mathematics and Computer Science at The Citadel. A student's score on the MPE will determine whether or not the student will need to complete MATH 119, Algebra and Trigonometry, before taking MATH 131 or HONR 131.

A student can also take one (or two) core mathematics course that is at a higher level than the one required by his/her major to complete his/her core mathematics requirement. The following table provides some possible choices for a student to complete his/her core mathematics requirement:

Core Math Requirements	Other Possible Choices
MATH 104/MATH 105	MATH 104/MATH 106
	MATH 105/MATH 106
	MATH 106/MATH 107

	MATH 119/MATH 105
	MATH 119/MATH 131
	MATH 131/107
	MATH 131/132
MATH 104/MATH 106	MATH 119/106
	MATH 119/MATH 131
	MATH 131/107
	MATH 131/132
MATH 104/STAT 160	MATH 106/STAT 160
	MATH 119/STAT 160
	MATH 131/STAT 160
MATH 106/MATH 107	MATH 131/107
	MATH 131/132

**History:** History teaches students information about the past which helps to explain the human condition, and more importantly, teaches students to think about human affairs as historians do.

The information in the core history courses concerns matters of major significance in the human story. It is sufficiently remote to be viewed dispassionately and comprehensively, and it is of a sufficient quantity to display major forces at work over a long period.

To begin thinking as a historian does, the student is required to encounter a variety of evidence about past events, to weigh it by several standards, and to discern in it causes, effects, theories, facts, inconsistencies, and the like; in addition, the student is required to attempt, according to the standards of the discipline, a narrative assessment of what the evidence reveals about the past.

What a student gains from such a study of history, besides the accumulation of information and the rigorous exercise of mental faculties, is the ability to view human activity in its temporal and other dimensions and also from a large and objectively framed perspective, develop a balanced regard for both concrete deeds of people and for the larger patterns which these deeds constitute.

Each student is required to complete two semesters of History of Western Civilization, HIST 103/104, or two semesters of History of World Civilization, HIST 105/106. Honors Program participants may take HONR 103/104 to satisfy their history requirement.

**Science:** Studies in a science require a student to make observations about the physical world, to reason about observations according to scientific standards, and to begin to understand the system of principles that control nature.

The method of science is to make and record observations about material phenomena, to arrange the accumulated data in a systematic way, to develop inductively hypotheses which explain the data, and finally, to design and perform experiments which test these hypotheses and their domain. Only when these hypotheses are independently corroborated and exhibit predictive capability can they be allowed to stand as scientific theory. When a student practices the scientific methods and learns to account for every aspect of the phenomena; to construct a hypothesis which is based

upon scientific observations which also has general application; to follow hunches and intuitions but to hold them in suspense so as to contrive a rational explanation; and then to test the explanation by an experiment which publicly applies it to a demanding case, the student develops a healthy understanding of nature and a firmly established appreciation for the marvels of the physical world.

Each student must complete four semesters of science. For non-engineering majors, this requirement must be met by two sequences of two semesters each in biology, chemistry and/or physics. No more than one sequence is to be completed in any single science. Students pursuing a degree in the Department of Health, Exercise, and Sport Science meet the requirements for the study of biology through the three-semester sequence BIOL 101/111, BIOL 217/227, and BIOL 218/228. Students pursuing an engineering degree may choose to meet their core science requirement by taking the appropriate required two-semester sequence in one science and then taking two of the one-semester courses designed specifically for engineers in each of the other two different sciences. Engineering majors should consult the degree requirements of their particular department for specific details.

**Social Sciences:** The ultimate goal of the social sciences is the understanding of those aspects of human experience that are social, political, economic, and psychological. By applying a variety of methods including hypothesis testing, quantification, and statistical analysis, the social sciences seek to construct empirically based theories of human behavior. Because the social sciences differ from the natural sciences in subject matter and from the humanities in method, they occupy a distinctive position among the academic disciplines. The social sciences are to human phenomena what the natural sciences are to natural phenomena.

The social sciences are important because of the significance of social theories in understanding human conduct and because of the increasing reliance on the methods, techniques, concepts, and vocabularies of the social sciences.

Each student is required to complete a one-semester course in the social sciences, and this course must be selected from among the following: ANTH 202 (Cultural Anthropology), HONR 203 (Honors Social Science Project), PSCI 102 (American National Government), PSYC 201 (General Psychology), and SOCI 201 (Introduction to Sociology).

**Foreign Languages:** In the “global village,” we can no longer afford to live in linguistic isolation, expecting to influence those who do not know our language while remaining ignorant of theirs. It is more vital now than ever that we become proficient in foreign languages and knowledgeable about the cultures of their speakers.

Not only diplomats and military personnel, but also business people, engineers, scientists, doctors, lawyers, and teachers can expect to spend more time abroad themselves, working and travelling in other countries. Command of a foreign language enables them to be far more successful in their work and more comfortable in their surroundings.

The benefits of language study are many and varied: practical ability to commu-

nicate with non-English speakers; greater understanding of our own culture through investigation of another; increased exposure to the thought of significant world authors; and enhanced appreciation of the richness of English.

Through marshaling their faculties to synthesize instantly vocabulary, grammar, syntax, and idiom in coherent response to a simple verbal question, students train their minds to deal with the abstract and learn mastery of any problem with which life may confront them.

Other than majors in education, physical education (teaching track), and civil or electrical engineering, each student is required to study the same foreign language — Chinese, French, German, or Spanish — through the 202 level. The Department of Modern Languages requires placement testing each fall for entering students.

**Physical Education:** The required physical education program for cadets is designed to provide an exemplary environment and experiences which contribute to an improved quality of life for the student. The program offers basic instruction in adult and lifetime physical fitness, healthful living, physical activities and recreational sports which are of immediate and lasting value. Each cadet is required to complete RPED 250, Contemporary Health Foundations, and RPED 251, Foundations of Fitness and Exercise, as well as two different activity courses.

### The Major Curriculum

Building on the knowledge and skills acquired through study of core curriculum courses, the curriculum of each major consists of carefully selected required courses complemented by a variety of electives. These electives fall into one of the following categories:

Elective refers to a course which is required for graduation but does not meet a core or major requirement.

Approved Elective refers to a course which is required to meet major requirements but must be selected from a list of courses determined by the individual department.

Non-departmental Elective refers to a course which is required for graduation, does not meet core or major requirements, and must be taken outside the major department. Students are encouraged to study areas outside the major to ensure as broad an educational experience as is practical.

In addition to providing the student with a sound foundation in the discipline, work offered in each major course of study stresses written and oral communications and ensures that each student is able to use the computer as a tool within the discipline. All students, including transfer students from other colleges, are required to earn at The Citadel a minimum of one-half the semester hours prescribed for their major course of study.

### Academic Minor

A minor is defined as a course of study that enables a student to make an inquiry into a single discipline or to investigate a particular topic across the boundaries of two or more disciplines. In either case, the minor is not simply a specified number of credit hours, but a well-defined program.

A minor should complement the student's major and not simply expand it with more courses in the same field. For this reason, students may not ordinarily pursue both a major and minor in the same discipline. However, in the case where a discrete topical minor is administered by the student's major department, an exception may be in order.

A minor consists of an ordered series of courses totaling at least 15 credit hours, at least 12 of which must be beyond core curriculum and courses specified for major or other minor requirements and at least 6 of which must be at the 300/400 level. At least 9 hours of the minor must be organized in a logical sequence of required courses which provides general direction for the student's study. At least 9 hours in the minor must be completed at The Citadel or in a Citadel Study Abroad Program.

The student must earn a grade-point average of at least 2.000 on all coursework completed in the minor. Requirements for the minor must be completed concurrently with requirements for the student's major. A student who meets all requirements for an approved minor will have both the major and minor indicated on the transcript. *Requirements for each minor are presented in the academic school/department sections of this catalog.*

### Minor in Aerospace Science

#### *Objectives:*

The minor in aerospace science is designed to allow a student majoring in science, mathematics, engineering, or at least successfully completing the introductory calculus based physics sequence an opportunity to acquire an understanding of aerodynamics in the broad sense. The physics of flight, of propulsion, and of the atmosphere will be addressed through an understanding of fluid dynamics.

#### *Competencies, Knowledge, or Skills to be Achieved:*

Completing this minor will provide an understanding of the basic principles of fluid dynamics as it applies to the flight of aircraft, their lift, thrust, stability, and control, as well as the atmosphere in which that aircraft flies. The principles of fluid dynamics will be also applied to hydrodynamics and the "flight" of boats and ships in and on the sea. External and internal fluid flow is covered such that propulsion systems will be addressed.

This minor can be taken by students majoring in a STEM discipline or who have successfully taken the calculus based introductory physics sequence 221/271 and 222/272 with the approval of the department head.

#### *Structure of the Minor:*

##### 1. *Required Courses: (6 credit hours)*

PHYS 241	3	Physics of Flight
PHYS 341	3	Fundamentals of Aerodynamics

##### 2. *Elective Courses: (9 credit hours of which only 3 can be at the 200 level)*

PHYS 243	3	Meteorology
PHYS 315	3	Classical Mechanics
PHYS 343	3	Applied Climatology
PHYS 391	2	Fluids Laboratory
PHYS 393	1	Flight Simulation
PHYS 410	3	Thermodynamics
PHYS 441	3	Fluid Dynamics
ASTR 201	3	Astronomy
ASTR 412	3	Astrophysics

##### 3. *Projected Course of Study*

Students are expected to have had two semesters of calculus as well as Physics 221/271 and 222/272 (or approval of the department head).

*Total Credit Hours Required* --15, at least 9 of which must be completed at The Citadel (Plus two semesters of calculus and two semesters of Physics with Calculus. Note: Students majoring in Physics may apply only one required physics course to both the Physics Major and the Aerospace Minor.)

For further information, please contact the Department of Physics.

### Minor in African American Studies

(Course numbers in parentheses are those used prior to 2007.)

The Minor in African American Studies is designed to underscore the contributions of people of African descent to, and their roles in, American history and to emphasize the importance of diversity to the Corps of Cadets. Through broad interdisciplinary study, the program aims to highlight an appreciation for the significant ways race, gender, and ethnicity have combined to shape our cultural heritage while promoting the values of excellence in teaching, research, and community service. It further aims:

1. To improve student's knowledge of the African-American experience.
2. To cultivate students' ability to think critically, to express themselves effectively, and to respect cultural and gender diversity.
3. To encourage faculty to share their expertise with the community and to maintain a community service component which promotes special classes, symposia, forums; the result will be a contribution to the intellectual, cultural, and ethical growth of The Citadel and the community.

**Administration:** The minor in African American Studies is supervised by a Steering Committee that consists of one representative from each of the constituent departments within the minor. Each department will choose its representative on the Steering

Committee. In consultation with the committee, the Dean of Humanities and Social Sciences will appoint one of its members to serve as overall Director of the Minor. The Director and the Steering Committee will meet at least once each semester (fall and spring) to plan activities related to, and set appropriate policies for, the minor. The Director will have primary responsibility for administering those activities and policies, will serve a term of three years, and may be renewed by the Dean for an additional term with the advice and consent of the Steering Committee. Directors will submit annual reports on the minor to the Dean of the School of Humanities and Social Sciences.

**Structure of the Minor:** The minor will consist of 5 courses (15 credit hours). One of the courses is required of all minors. The other four must be taken in at least two different departments from a list of approved electives. Nine of the total fifteen hours must be completed through courses taken at The Citadel.

1. **Required Course:** All minors must satisfactorily complete the following course.  
AFAM 205 Introduction to African American Studies
2. **Elective Group A:** All minors must also satisfactorily complete at least two of the following Group A courses (a minimum total of six credit hours).  
ENGL 349 African American Literature  
HIST 310 African American History to 1865  
HIST 311 African American History since 1865  
HIST 312 (409) The Modern Civil Rights Movement  
OTHER: Any Independent Study, Senior Research Project, Internship, or special topics course whose primary focus is the African-American experience and which is approved by the Director of the Program.
3. **Elective Group B:** All minors may take, and count toward the minor, up to two (a maximum total of six credit hours) of the following Group B courses.  
ANTH 202 Cultural Anthropology  
ENGL 340 Southern Literature to 1900  
ENGL 348 Twentieth Century Southern Literature  
HIST 316 Old South  
HIST 317 New South  
PSCI 307 Southern Politics  
PSCI 341 African Affairs  
PSCI 462 Constitutional Law: Civil Rights and Liberties  
PSYC 305 Social Psychology  
SOC 304 Minority Group Relations
4. **Projected Course of Study:** Students interested in earning the minor will be instructed to file a declaration of intent with the director of the program by the end of the first semester of the junior year. This declaration will outline the projected course of study and will be approved by the director. In addition to approving this projected course of study, the director will assume responsibility

for publicizing the program and for monitoring each student's progress toward fulfilling the requirements of the minor; in this latter capacity, the director will be responsible for verifying that the student has met the requirements of the minor and for notifying the Records Office to that effect.

*Total Credit Hours Required*—15, at least 9 of which must be completed at The Citadel.

For further information, please contact the Department of History.

### **Minor in American Politics: Democracy and the Political Process**

#### *Objectives:*

This minor is designed to provide students with an understanding of the institutions and processes involved in the formulation of demands made on the American political system and the responsiveness of the authorities in the system to these demands.

#### *Competencies, Knowledge, or Skills to be Achieved:*

Through the study of topics such as the formulation and expression of public opinion, the effectiveness with which political parties create and maintain broad-based governing coalitions, the structures and operations of basic governing institutions, and the nature of the policy process, students should develop a solid grasp of the linkages between public opinion, groups, parties, institutions, and public policy. Since democratic theory assumes the existence of this linkage, students completing the minor should have a solid understanding of the practice of American democracy. Since a number of courses in the minor require the quantitative analysis of data, students will also deepen their knowledge of the methods of the social sciences. The requirement that papers and reports be submitted should enhance mastery of the English language.

**This minor is not approved for students majoring in political science.**

#### *Structure of the Minor:*

##### 1. *Required Courses*

- PSCI 301 American Parties and Politics
- PSCI 308 Public Opinion
- PSCI 305 American Presidency or PSCI 306 Legislative Process

##### 2. *Electives (choose two)*

- PSCI 304 American Political Thought
- PSCI 305 American Presidency or PSCI 306 Legislative Process
- PSCI 307 Southern Politics
- PSCI 310 Domestic Terrorism
- PSCI 311 The Civil Rights Movement and American Politics
- PSCI 371 Leadership in Politics
- PSCI 393 Research Methods in Political Science

PSCI 396 Politics and the Media  
 PSCI 401 Political Issues and Public Policy  
 PSCI 403 Topics in American Government and Politics  
 PSCI 431 American Foreign Relations  
 PSCI 499 Internship

*Total Credit Hours Required*—15, at least 9 of which must be completed at The Citadel

For further information, please contact the Department of Political Science.

### Minor in Applied Mathematics

#### *Objectives:*

This minor is designed to allow a student not majoring in mathematics to learn techniques of applied mathematics and to be exposed to a variety of mathematical modeling techniques. Students are expected to have completed one of the calculus sequences MATH 106/107, MATH 131/132, or HONR 131/132 to be eligible.

#### *Competencies, Knowledge, or Skills to be Achieved:*

A student who completes this minor will have a sound foundation in techniques of linear algebra and differential equations, and will have utilized these techniques in at least one area of application.

**This minor is not approved for students majoring in mathematics.**

#### *Structure of the Minor:*

##### 1. Required courses: (10 credit hours)

MATH 234 Applied Engineering in Mathematics I  
 MATH 240 Linear Algebra or  
 MATH 206 Introduction to Discrete Structure  
 MATH 470 Mathematical Models and Applications or approved  
 MATH 490

##### 2. Electives (6 credit hours)

Choose two from among: MATH 343, MATH 344, MATH 381, MATH 382, STAT 366, STAT 461 or approved MATH 490

*Total Credit Hours Required* — 16, at least 9 of which must be completed at The Citadel.

For further information, please contact the Department of Mathematics and Computer Science.

### Minor in Applied Physics

#### *Objectives:*

The minor in applied physics is designed to allow a student not majoring in physics the opportunity to learn many of the techniques of experimental physics and to obtain an exposure to the principles of modern physics.

#### *Competencies, Knowledge, or Skills to be Achieved:*

A student pursuing a minor in applied physics will become competent in the techniques of experimental physics. Skills in applied optics, electronics, fluid flow, solid state, laboratory and experimental techniques will be emphasized.

**This minor is not approved for students majoring in physics.**

#### *Structure of the Minor:*

##### 1. Required Courses: (7 credit hours)

PHYS 223/233/273	5	Modern Physics
PHYS 451	2	Advanced Laboratory Physics

##### 2. Elective Courses: (9 credit hours)

Choose three:

PHYS 241	3	The Physics of Flight
PHYS 243	3	Meteorology
PHYS 308/358	4	Optics
PHYS 315	3	Analytical Mechanics
PHYS 341	3	Fundamentals of Aerodynamics
PHYS 343	3	Applied Climatology
PHYS 410	3	Thermodynamics
PHYS 307/357	4	Electronic Instrumentation
PHYS 301	3	Biological Physics
PHYS 391	2	Fluids Laboratory
PHYS 393	1	Flight Simulation
PHYS 319	2	Research Planning
PHYS 420	2	Research Planning

##### 3. Projected Course of Study

Students are expected to have had two semesters of calculus as well as Physics 221/271 and 222/272 (or approval of the department head).

*Total Credit Hours Required*—16, at least 9 of which must be completed at The Citadel (plus two semesters of calculus and two semesters of Physics with Calculus).

For further information, please contact the Department of Physics.

### Minor in Applied Statistics

#### *Objectives:*

A minor in applied statistics will provide students the opportunity to obtain a sound background in practical statistical skills necessary for employment in business, industry, and government, as well as data analysis skills in doing research related to business, engineering, science (computer science, physics, life science, and health science), and social science (criminal justice, intelligence, political sciences, and psychology).

#### *Competencies, Knowledge, or Skills to be Achieved:*

A student who completes this minor will have had the opportunity to develop a variety of statistical tools for analyzing data. The student will understand the fundamental idea behind statistical data analysis. The student

will make extensive use of statistical software packages and will have the opportunity to apply techniques of statistical analysis in at least one area of application.

*Structure of the Minor:*

1. One required introductory course: (3 credit hours)
  - (a) STAT 160      Statistics
  - (b) BADM 205      Business Statistics
  - (c) STAT 261      Introduction to Probability and Statistics
  - (d) ELEC 412      Applied Probability and Statistics
2. Two required courses: (6 credit hours)
  - (a) STAT 366      Applied Statistics
  - (b) STAT 461      Data Analysis
3. Electives (6 credit hours)

Choose one of the following sequences:

- PSCI 308 and PSCI 393
- PSYC 201 and PSYC 203
- PHED 303 and EXSC 305

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel

For further information, please contact the Department of Mathematics and Computer Science.

### **Minor in Biology**

Students seeking a minor in Biology will be required to complete either the General Biology I and II sequence (BIOL 101, 102, 111, 112) or the Introduction to Biology I and II sequence (BIOL 130, 131, 140, 141). A minimum of 12 additional credit hours is required for the minor. One course must be selected from each of the three areas listed below and at least two of these courses must involve laboratory work.

#### **Cell and Molecular Category Courses**

- BIOL 205 Cell Biology
- BIOL 290 Microbiology
- BIOL 308 Genetics
- BIOL 340 Pathophysiology
- BIOL 341 Pharmacology
- BIOL 401 Developmental Biology
- BIOL 402 Descriptive Histology
- BIOL 424 Molecular Genetics
- BIOL 427 Immunology

#### **Field Biology Category Courses**

- BIOL 209 Environmental Science
- BIOL 314 Vascular Flora of South Carolina

- BIOL 406 Ecology
- BIOL 407 Conservation Ecology
- BIOL 408 Ornithology
- BIOL 409 Marine Biology
- BIOL 410 Vertebrate Natural History
- BIOL 425 Tropical Rainforest and Reef Ecology
- BIOL 426 Freshwater Biology

#### **Organismal Category Courses**

- BIOL 203 Introduction to Plant Biology
- BIOL 208 Evolution
- BIOL 217 Human Anatomy and Physiology I
- BIOL 218 Human Anatomy and Physiology II
- BIOL 227 Human Anatomy and Physiology I Laboratory
- BIOL 228 Human Anatomy and Physiology II Laboratory
- BIOL 301 Invertebrate Zoology
- BIOL 302 Comparative Vertebrate Anatomy
- BIOL 309 Animal Behavior
- BIOL 322 History of Biology
- BIOL 403 Mammalian Physiology
- BIOL 414 Environmental Physiology
- BIOL 419 Economic Botany
- BIOL 421 Toxicology

*Total Credit Hours Required:* 12 credit hours beyond the general education requirement, 9 of which must be completed at The Citadel

For further information, please contact the Department of Biology.

### **Minor in Business**

#### *Objectives:*

The minor in business is designed to allow a student the opportunity to learn the foundations of business, including leadership and management skills. The elective course is designed to allow the student to learn about a functional area in business or to delve more deeply into one of the foundations.

#### *Competencies, Knowledge, or Skills to be Achieved:*

A student who completes the minor will have developed a basic competency in economics, accounting, business law and ethics, and skills in the leadership and management of organizations. Through the elective, the student will achieve additional knowledge or skill in one of the following foundational or functional areas: economics, statistics, accounting, communications, marketing, computer applications, law, international business, finance, real estate, leadership, human resource management, or information systems.

**This minor is not approved for students majoring in business.**

*Structure of the Minor:*

1. Required courses: (9 credit hours)
  - BADM 202 Principles of Microeconomics\*
  - BADM 211 Introduction to Financial Accounting
  - BADM 305 Legal and Ethical Environment of Business
2. Required Leadership Elective (3 credit hours). Choose one of the following (the course not chosen can be taken as an Elective in item 3):
  - BADM 338 Management and Organizational Behavior\*
  - BADM 371 Leadership in Organizations\*
3. Elective (3 credit hours):
  - BADM 201 Principles of Macroeconomics\*
  - BADM 205 Business Statistics I\*
  - BADM 212 Introduction to Managerial Accounting\*
  - COMM 216 Communications in Business\*
  - BADM 309 Marketing Principles\*
  - BADM 217 Computer Applications in Business
  - BADM 318 Commercial Law\*
  - BADM 320 International Business
  - BADM 321 Business Finance\*
  - BADM 326 Principles of Real Estate
  - BADM 338 Management and Organizational Behavior
  - BADM 371 Leadership in Organizations\*
  - BADM 409 Human Resource Management
  - BADM 415 Relationship Marketing
  - BADM 417 Management Information Systems\*

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel.

\*Prerequisites must be met - see School of Business section for prerequisite requirements.

**Note:** For cases in which the major discipline already requires any of the Minor in Business required courses (which cannot be used for a dual purpose and counted towards the Business minor), the student must contact the School of Business to determine appropriate substitutions.

For further information, please contact the School of Business.

### **Minor in Chemistry**

*Objectives:* The minor in chemistry will provide students with a stronger background in chemistry than they would obtain from the requirements in the core curriculum. It is designed to acquaint students with the more advanced theories and techniques that are illustrated in the major subfields of chemistry.

*Knowledge and/or Skills to be Achieved:* In general, the student completing the minor will have a more in-depth foundation in chemical bonding, physical properties and synthesis of compounds, chemical thermodynamics and kinetics,

chemical and instrumental analyses, properties of biomolecules, and the design of polymers. More specifically, by the choice of advanced courses, the student may gain greater insight with regards to one or more of these general areas to meet specific career goals. Additionally, because the department places considerable emphasis on oral and written presentations, the student will gain considerable experience in interpreting and presenting chemical data in a professional manner.

**This minor is not approved for students majoring in Chemistry.**

*Structure of the minor:*

1. Required Courses: (8 Credit Hours)
  - CHEM 151 General Chemistry I\*
  - CHEM 161 General Chemistry Laboratory I\*
  - CHEM 152 General Chemistry II\*
  - CHEM 162 General Chemistry Laboratory II\*
  - CHEM 207 Organic Chemistry I
  - CHEM 217 Organic Chemistry Laboratory I
  - CHEM 208 Organic Chemistry II
  - CHEM 218 Organic Chemistry Laboratory II

\*These four courses meet the requirements for the core curriculum, and their hours are **not** counted toward the total for the Minor in Chemistry. Also note that CHEM 103/113 and CHEM 104/114 do **not** meet the requirements for the Minor in Chemistry. Biology majors may count CHEM 207/217 and CHEM 208/218 towards the minor.

2. Electives: (7 Credit Hours)
  - A. One of the four sequential upper-level offerings (300 or above)
    - CHEM 305/306 Physical Chemistry I & II
    - CHEM 300/302 Quantitative Analysis/Instrumental Analysis
    - CHEM 401/402 Inorganic Chemistry I & II
    - CHEM 409/410 Biochemistry I & II
  - B. If the Physical Chemistry, Inorganic Chemistry, or Biochemistry sequence is chosen, at least one upper-level laboratory course (CHEM 315, 316, or 460) must also be completed.

The additional courses must be approved in advance by the Head of the Department of Chemistry.

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel.

For further information, please contact the Department of Chemistry.

### **Minor in Chinese, French, German, or Spanish**

*Objectives:*

The minor in Chinese, French, German, or Spanish builds on skills developed in the elementary/intermediate sequence, taking the student beyond practical proficiency to more sophisticated modes of discourse and greater understanding of social norms.



*Competencies, Knowledge, or Skills to Be Achieved:*

Employing the latest technology, instruction in advanced conversation and composition expands and refines expression in social and professional contexts. Course in the Department's various summer study-abroad programs offer total immersion and highly individualized tutorials. Courses in civilization and culture, business language, and literature, in addition to promoting greater fluency, provide an introduction to areas of specialization within the discipline.

Many language majors, recognizing the considerable advantages of versatility in the marketplace, now declare a minor in another language.

*Structure of the Minor (Chinese, French, German)*

1. Required Courses
  - a. 301 and 302 (in the chosen language)
  - b. at least one 400-level course in the chosen language, taken at The Citadel or in a Citadel Study-Abroad program
2. Electives
 

Two advanced courses (i.e., courses numbered 300 and above)

*Structure of the Minor (Spanish)*

1. Required Courses
  - a. SPAN 301 and 302
  - b. SPAN 305 or one 400-level course in Spanish, taken at The Citadel or in a Citadel Study-Abroad program
2. Electives
 

Two advanced courses in Spanish (i.e., a course numbered 300 and above)

*Total Credit Hours Required:* 15 hours in one language at the 300-level or above, least 9 of which must be completed at The Citadel.

For further information, please contact the Department of Modern Languages, Literatures and Cultures.

**Minor in Civil and Environmental Engineering***Objective:*

Provide engineering students from other departments the opportunity to obtain a minor in a single civil engineering technical area.

*Competencies, Knowledge, or Skills to be Achieved:*

A student who completes this minor will have the opportunity to develop a basic competency in civil engineering, apply basic engineering principles to another field, stimulate creative thinking, and develop problem solving skills. Through the elective field of emphasis, the student will achieve additional knowledge or skill in either structures or environmental.

*Structure of the Minor:*

1. *Required courses: (10 credit hours)*

CIVL 202	Statics, 3 credit hours
CIVL 203	Dynamics, 3 credit hours
CIVL 304	Mechanics of Materials, 3 credit hours
CIVL 307	Mechanics of Materials Laboratory, 1 credit hour
2. *Civil and Environmental Engineering Fields of Emphasis*
  - a. *Structures: (12 credit hours)*

CIVL 309	Structural Analysis, 4 credit hours
CIVL 314	Engineering Economy, 2 credit hours
CIVL 404	Concrete Design, 3 credit hours
CIVL 406	Steel Design, 3 credit hours

**OR**

  - b. *Environmental: (13 credit hours)*

CIVL 320	Fluid Mechanics, 3 credit hours
CIVL 321	Hydrology and Hydraulics, 3 credit hours
CIVL 322	Intro to Environmental Engineering, 3 credit hours
CIVL 408	Water and Wastewater Systems, 3 credit hours
CIVL 418	Fluid Mechanics Lab, 1 credit hours

Plan of Study: Prerequisites and corequisites for each of the above courses must be met as presented in the course descriptions.

*Total Credit Hours Required:* 22 for Structures or 23 for Environmental, at least 9 of which must be completed at The Citadel.

For further information, please contact the Department of Civil and Environmental Engineering.

**Minor in Computer Engineering***Objective:*

The minor in Computer Engineering is designed to allow the student with quantitative and scientific aptitudes and interests to acquire a basic level of competence in computer engineering.

*Competencies, Knowledge, or Skills to be Achieved:*

A student who completes this minor will have the opportunity to develop a strong foundational background in computer engineering, apply basic engineering principles, stimulate creative thinking, and develop problem solving skills. Coursework can assist students in meeting prerequisites for graduate study in computer engineering or related field.

*Structure of the Minor:*

1. *Required Courses: (9 credit hours)*

ELEC 206	Computer Applications for Electrical Engineers*
ELEC 311	Digital Logic and Circuits
ELEC 330	Digital Systems Engineering

2. *Elective Fields of Emphasis (choose two): (6 credit hours)*

ELEC 405	Electrical Measurements
ELEC 418	Advanced Digital Systems
ELEC 419	Computer Network Architecture
ELEC 423	Digital Signal Processing
ELEC 428	Computer Architecture

\* Another 3 credit hour programming course such as CSCI 201 may be substituted with department head approval.

Prerequisites courses ELEC 106 and ELEC 313 are waived for computer engineering minor students.

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel.

For further information, please contact the Department of Electrical Engineering.

### Minor in Computer Programming

*Objectives:*

A minor in computer programming will provide a student with the opportunity to develop the skills necessary for designing and understanding large programs.

*Competencies, Knowledge, or Skills to be Achieved:*

A student who completes this minor will receive experience with computer programming in a high-level object-oriented language. A student will have the opportunity to develop a sound foundation in techniques for designing, implementing, testing, and debugging computer software.

**This minor is not approved for students majoring in Computer Science.**

*Structure of the Minor:*

1. Required courses: (14 credit hours)

CSCI 201	Introduction to Computer Science I
CSCI 202	Introduction to Computer Science II
CSCI 223	Data Structures and Algorithms
MATH 206	Discrete Structures*

\*Mathematics majors must substitute an additional CSCI elective.

2. Electives (3 credit hours)

Any CSCI course numbered 300 or higher.

*Total Credit Hours Required:* 17, at least 9 of which must be completed at The Citadel

For further information, please contact the Department of Mathematics and Computer Science.

### Minor in Criminal Justice

*Objectives:*

This minor is designed to provide students with an introduction to criminal justice, including theories of criminality, procedures in the criminal justice process, and the principal actors and institutions which interact with each other.

*Competencies, Knowledge, or Skills to be Achieved:*

The minor introduces students to basic concepts and terms in criminal justice as well as to the theory and practice of the criminal justice process. In addition, the minor seeks to develop each student's capabilities for critical thinking and systematic analysis in relation to contemporary criminal justice issues.

**This minor is not approved for students majoring in Criminal Justice or for students majoring in Political Science whose subfield is Pre-Law and Legal Studies.**

*Structure of the Minor:*

1. *Required Courses*

CRMJ 201	Introduction to Criminal Justice
CRMJ 202	Criminology
CRMJ 370	Police Systems and Practices
CRMJ 380	Corrections

2. *Electives (choose one)*

CRMJ 330	Emergency Management
CRMJ 331	Cyber Investigations
CRMJ 332	Comparative Counter-Terrorism
CRMJ 333	Immigration and Security
CRMJ 371	Criminal Law
CRMJ 372	Critical Issues in Law Enforcement
CRMJ 373	Criminal Evidence
CRMJ 375	Criminal Justice Agency Administration
CRMJ 381	Organized Crime
CRMJ 382	Drugs and Crime
CRMJ 383	Comparative Criminal Justice Systems
CRMJ 384	International Crime
CRMJ 385	Juvenile Delinquency
CRMJ 386	Research Methods in Criminal Justice
CRMJ 387	Criminal Investigation
CRMJ 388	White Collar Crime
CRMJ 389	Criminal Justice in Latin America
CRMJ 390	Victimology
CRMJ 391	Criminalistics
CRMJ 392	Computer Crime
CRMJ 393	Homicide
CRMJ 465	Special Topics in Criminal Justice

CRMJ 470	Ethics
CRMJ 471	Psychology of Crime
CRMJ 472	Crime Prevention
CRMJ 473	Biology and Crime
CRMJ 498	Independent Study
CRMJ 499	Internship

*Total Credit Hours Required:* 15, of which at least 9 must be completed at The Citadel.

For further information, please contact the Department of Criminal Justice.

### **Minor in Cybersecurity**

#### *Objectives:*

This minor is designed to prepare students with the technical skills for entry into cybersecurity positions in industry, government agencies, or the military.

#### *Competencies, Knowledge, or Skills to be Achieved:*

A student who completes this minor will have a sound technical foundation in the disciplines required for cybersecurity including computer organization/architecture, computer networks, computer security, and cybersecurity. The content of this minor is based on knowledge unit recommended by the National Security Agency and Department of Homeland Security National Center of Academic Excellence Cyber Defense Education (CAE-CD-E) program.

#### *Structure of the Minor:*

1. Required courses (6 credit hours)
  - CSCI 327 Computer Security
  - CSCI 427 Advanced Cybersecurity
2. Required course in computer organization/architecture (3 credit hours)
 

One of the following courses:

  - CSCI 305 Computer Organization and Programming
  - ELEC 330 Digital Systems Engineering
3. Required course in computer networks (3 credit hours)
 

One of the following courses:

  - CSCI 317 Computer Networks and Internets
  - ELEC 419 Computer Network Architecture
4. Elective (3 credit hours)
 

One of the following courses:

  - CRMJ 331 Cyber Investigations
  - CRMJ 392 Computer Crime

Students majoring in Computer Science will be required to take both courses or one of these courses plus one additional computer science course at the 300/400 level.

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel.

For further information, please contact the Department of Mathematics and Computer Science.

### **The Minor in Cyber Interdisciplinary Studies**

#### *Objectives:*

Due to sophisticated cyber attacks and increased use of cyberspace, it is important to make every student a good cyber citizen who knows the concepts and best practices of cybersecurity, cyber safety and cyber ethics. This comprehensive and interdisciplinary minor in cybersecurity education is designed for all majors.

#### *Competencies, Knowledge, or Skills to be Achieved:*

A student who completes this minor will gain knowledge in information systems, principles and practices of cybersecurity, cyber safety and cyber ethics, basic defense mechanism in cyberspace, best practices for seizing and securing digital evidence in cyber investigations, current state of cyber crimes, cyber laws, and cyber policies.

#### *Required Courses (12 credits)*

CSCI 210	Introduction to Information Systems
CSCI 227	Principles and Practices of Cybersecurity
CRMJ 331	Cyber Investigations
CRMJ 392	Computer Crime

#### *One Elective (3 credits)*

Choose one of the following:

CSCI 490	Special Topics
CRMJ 465	Special Topics

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel.

### **The Minor in East Asian Studies**

#### *Objectives:*

The minor in East Asian Studies provides well-qualified upperclassmen the opportunity to develop a secondary field of expertise in a discipline of vital national interest.

*Administration:* The minor in East Asian Studies is supervised by a Steering Committee that consists of one representative from each of the constituent departments within the minor. Each department will choose its representative on the Steering Committee. In consultation with the committee, the Dean of

Humanities and Social Sciences will appoint one of its members to serve as overall Director of the Minor. The Director and the Steering Committee will meet at least once each semester (fall and spring) to plan activities related to, and set appropriate policies for, the minor. The Director will have primary responsibility for administering those activities and policies, will serve a term of three years, and may be renewed by the Dean for an additional term with the advice and consent of the Steering Committee. Directors will submit annual reports on the minor to the Dean of the School of Humanities and Social Sciences.

*Structure of the Minor:*

Fifteen credit hours, of which six hours are in language:

either CHIN 101/102, *Intensive Introduction to Chinese I and II*,  
JAPN 101/102, *Intensive Introduction to Japanese I and II*,

or

KORE 101/102, *Intensive Introduction to Korean I and II*;

at least three hours in history, chosen from:

HIST 357, *History of Premodern China*,  
HIST 358, *History of Modern China*,  
HIST 359, *Silk Roads and Nomadic Empires*,  
HIST 360, *History of Japan*;  
HIST 365, *Special Topics in Non-Western History*

and at least three hours in political science, chosen from:

PSCI 337, *East Asian Affairs*,  
PSCI 338, *Southeast Asian Affairs*,  
PSCI 433, *Topics in International Politics: Northeast Asian Affairs*;

and a three-hour elective from either history or political science, chosen from the courses listed above.

*Prerequisite:* Because Chinese is the only Asian language offered through 202 at The Citadel, registrants for Japanese and Korean (Category IV languages by the Defense Language Institute's scale of hours required for mastery), must have completed the core requirement in Chinese (Category IV language), French, German, or Spanish (Category II languages).

*Competencies, Knowledge, or Skills to Be Achieved in the Language Courses:* The intensive-introduction sequences develop basic practical communication through standard cognitive-code methodology. Daily study and practice of phonetics, orthography, vocabulary, grammar, syntax, idiom, and culture cultivate the four skills critical to foreign-language mastery: aural comprehension, oral expression, reading comprehension, and composition. By the end of the course, the diligent student will be able to converse intelligibly in general social situations, recognize and reproduce the phonetic alphabets and most-used characters of the pictographic writing systems, comprehend the gist of simple texts with the aid of a dictionary, and write brief summaries of those texts.

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel.

For further information, please contact the Department of Modern Languages, Literatures and Cultures and/or the Department of Political Science.

## Minor in Education

*Objectives:*

The minor in education is designed to help undergraduate students gain knowledge of educational history, theories, laws, and policies; become familiar with aspects of student development that may impact learning; think critically about social justice issues in education; and learn differentiated instructional techniques and classroom management strategies for working with diverse learners. The minor may be appropriate for undergraduate students who are interested in volunteering in public schools, teaching in private or nontraditional programs, and/or working in other educational settings (e.g., children's museums, youth service programs, training and professional development).

*Competencies, Knowledge, or Skills to Be Achieved:*

While students who pursue the minor will not be eligible for teacher licensure or certification, they will receive a strong foundational background in the field of education and will have the opportunity to complete field experiences in local schools. Coursework may also assist students in meeting prerequisites for graduate study in education.

*Structure of the Minor:*

1. Required courses (6 credit hours)
 

EDUC 101	Education in Modern Society
EDUC 202	Educational Psychology
2. Required course in student development (3 credit hours)
 

One of the following courses:

EDUC 206	Adolescent Development
EDUC 307	Child Development
3. Required course in social justice (3 credit hours)
 

One of the following courses:

EDUC 312	Learners with Exceptionalities
EDUC 409	Special Topics in Education: Teaching Culturally and Linguistically Diverse Students
4. Required course in pedagogy (3 credit hours)
 

One of the following courses:

EDUC 301	Foundations in Literacy
EDUC 330	Developing Leadership Skills through Peer Counseling
EDUC 401	Methods and Materials of Middle and High School Teaching
EDUC 409	Special Topics in Education: Classroom Assessment

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel.

For further information, please contact the Zucker Family School of Education.

### Minor in Electrical Engineering

*Objectives:* The minor in electrical engineering is designed to allow the student with quantitative and scientific aptitudes and interests to acquire a basic level of competence in one of two fields of electrical engineering.

*Structure of the Minor:*

#### 1. Required Courses: (7 credit hours)

ELEC 201 & 202	Electric Circuit Analysis I & II
ELEC 204	Electrical Laboratory

#### 2. Elective Fields of Emphasis:

##### a. Digital Electronics: (10 credit hours)

ELEC 306	Electronics I
ELEC 313	Electronics Laboratory
ELEC 311	Digital Logic and Circuits
ELEC 330	Digital Systems Engineering

OR

##### b. Control Systems: (12 credit hours)

ELEC 206	Computer Applications for Electrical Engineers
ELEC 309	Signals and Systems
ELEC 312	Systems I
ELEC 407	Systems II

#### 3. Plan of Study:

Prerequisites and corequisites for each of the above courses are as presented in the course descriptions below. (Exception: ELEC 106 is waived as a course prerequisite for the student pursuing a minor in electrical engineering.)

*Total Credit Hours Required :* 17 (Digital Electronics Track)  
19 (Control Systems Track)

*A total of 9 credit hours must be completed at The Citadel.*

For further information, please contact the Department of Electrical and Computer Engineering.

### Minor in English

*Objectives:*

Through the study of seminal literature and the practice of both academic and pre-professional writing, the minor in English hones the skills that people in every discipline use daily when they read, write, converse, and assert their independent ideas and opinions through these self-actualizing activities. Literature illustrates the rich interrelatedness of cultural, historical, economic, political, scientific, philosophical, and religious concerns, while encouraging individual creativity and serving as a model for cogent, graceful writing. The minor in English thus complements academic work in almost every other field, positioning the student for success in

either civilian or military life.

*Competencies, Knowledge, and Skills to be Achieved:*

The English minor trains students to read analytically, synthesize information quickly, think critically, and write persuasively. These crucial transferable skills equip students to navigate an ever-changing and frequently uncertain job market. They also provide a foundation for graduate work in the humanities and for a range of pre-professional advanced degrees in fields such as business, divinity, education, law, library science, museum work, public policy, and social work. It also exposes students to a range of important literary texts, the canon of imaginative writing often called “the best that has been thought and said in the world.”

Through the close analysis of literature, the minor also enables students to generate original arguments and ideas, to appreciate the nuanced range of perspectives on cultural and socioeconomic issues, to evaluate competing viewpoints, and to value diversity in an increasingly global society.

*Structure of the Minor:*

#### 1. Required Courses

One of the following foundational courses (3 credit hours):

ENGL 201  
ENGL 202  
ENGL 215

One of the following pre-professional writing courses:

COMM 207  
COMM 216  
COMM 260  
COMM 413  
ENGL 411

Or another approved pre-professional writing course.

#### 2. Electives

Any three classes chosen from the following range of courses (if not already taken as a Required Course)

ENGL 301-375  
ENGL 411-427  
COMM 301-498

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel.

### Minor in Fine Arts

*Objectives:*

The minor in Fine Arts is intended to deepen an appreciation for and encourage a lifelong engagement in the fine arts, including painting, sculpture, photography, music, film, drama, and creative writing. As participation in fine arts courses, both in practice and in theory, stimulates creative thinking and

develops problem solving skills that are applicable to other areas of study, this minor is meant to round out The Citadel experience. Students are also encouraged to engage with the broader artistic community of Charleston through participation in events, internships, exhibitions, and performances.

*Knowledge and/or Skills to be Achieved:*

Through the foundation courses in art and music, the student will gain a broad understanding of the cultural and historical significance of the fine arts as well as applied knowledge of a variety of artistic mediums. Further courses develop the student's interest in more specific areas, such as musical performance, emphasis on a particular visual medium, or internships in local arts organizations.

**This minor may not be approved for Education or English Majors unless required courses for their major do not overlap more than two classes with the minor requirements.**

*Structure of the Minor:*

1. Choose **two** introductory courses (6 credit hours)
 

FNAR 205	Music Appreciation
FNAR 206	Art Appreciation
FNAR 207	Art History
ENGL 209	Introduction to Film
FNAR 250	Special Topics
BAND 101/102/201/201	Band (sequence counts as 3 credits)
ENGL 208	Special Topics (where appropriate)
ENGL 209	Introduction to Film
ENGL 221	Introduction to Creative Writing
ENGL 222	Special Topics in Film Studies
  
2. Choose **three** additional elective courses, including at least two at or above the 300 level. (9 credit hours)
 

Introductory courses as listed above

BAND 301/302/401/402 (this total sequence for Band counts as 3 credits)

FNAR 304	Drawing
FNAR 305	Painting
FNAR 306	Photography
FNAR 307	Digital Forensic Photography
FNAR 350	Advanced Special Topics in Fine Arts
ENGL 303	Shakespeare I
ENGL 304	Shakespeare II
ENGL 322	English Drama to 1642
ENGL 351	20th Century American Drama
ENGL 368	20th Century Drama
ENGL 372	Film Studies

ENGL 375	Special Topics (where appropriate)
ENGL 401	Independent Study
ENGL 426	Creative Writing: Fiction
ENGL 427	Creative Writing: Poetry
COMM 499	Internship (may be used for 3 credits)
INTD 350	Citadel in D.C. (where appropriate)

\*Courses related to the Fine Arts in other departments may be considered and approved by the English, Fine Arts, and Communications Department Chair.

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel.

For further information, please contact the Department Chair of English, Fine Arts, and Communications.

### Minor in History

(Not open to history majors)

*Objectives:*

A minor in history, reflecting the structured and sequential offerings within the department, affords students who do not choose to major in history the opportunity to develop expertise within the discipline consistent with their interests and their plans beyond graduation. The minor is designed to give the non-history major an introduction to the basic skills of the historian and the depth of advanced study of the discipline offered within the department whether generally or specifically.

*Competencies, Knowledge, or Skills to be Achieved:*

Students completing the minor will have the beginning skills of the historian and advanced work within the discipline consistent with their interests. They will be experienced both in technique and knowledge and therefore be better prepared for their professional options following graduation.

*Structure of the Minor:*

1. While the student may design the minor in history either on the basis of the history major or to key it to one of the four groups of courses offered by the department, a required course in all cases is HIST 203 (Introduction to the Discipline of History).

2. The student must choose one of the groups below for the history minor. Except for world history, all courses by group may be found in this catalog under the major in history:

a. World History. A minimum of one course each from the following history groups (Groups I-IV): Europe, United States, Non-Western World, and Military.

b. European History (Group I). A minimum of four courses from the European history group.

c. United States History (Group II). (1) HIST 201/202 (Survey of American History). (2) At least two courses at the 300-level or above from the U.S. history group.

d. Non-Western World (Group III). A minimum of four courses from the Non-Western World group.

e. Military and Diplomatic (Group IV). A minimum of four courses from the Military and Diplomatic group.

*Total Credit Hours required:* 15 hours beyond the College Core Requirements in History (HIST 103-104), at least 9 hours of which must be taken at The Citadel.

*Note:* For transcript purposes, the history minor, depending on the elective sequence chosen above, will be designated as one of the following: World History, European History, United States History, Non-Western World History, or Military and Diplomatic History.

For further information, please contact the Department of History.

### **Minor in Intelligence and Homeland Security**

#### *Objectives:*

This minor is designed to introduce students to the concepts of Intelligence and Homeland Security. This includes terrorism, intelligence collection systems, cyber security, local and national security, engineering, defense contracting, and emergency management. This minor seeks to develop each student's capabilities for critical thinking and systematic analysis and is designed to increase the student's knowledge of effective leadership for national security. It will enhance the knowledge and skills of students majoring in other subjects but interested in applying their discipline within the fields of homeland security and/or intelligence.

#### *Competence, Knowledge, or Skills to be Achieved:*

The minor introduces students to intelligence analysis, critical thinking, and homeland security terms and practices as well as theoretical matters. Aside from an understanding of the nature of the legal process, the minor seeks to develop each student's capabilities for critical thinking and systematic analysis. This minor is designed to increase the student's knowledge of effective leadership for national security and of how to apply leadership strategies and tactics to complex intelligence and homeland security issues.

**This Intelligence and Homeland Security minor is open to all undergraduate students and require no prerequisite courses. In addition to the three required courses, Intelligence majors are required to take two non-Intelligence courses as electives.**

#### *Structure of the Minor:*

##### *1 Required Courses*

INTL 201	Introduction to Intelligence Studies
INTL 210	Homeland Security
INTL 310	Intelligence Collection Systems and Programs

##### *2. Electives (choose two)*

BIOL 207	Bioterrorism
CHEM 309	Chemistry of War
CRMJ 330	Emergency Management
CRMJ 331	Cyber Investigations
CRMJ 332	Comparative Counter-Terrorism
CRMJ 383	Comparative Criminal Justice
CSCI 227	Introduction to Cybersecurity
INTL 301	Advanced Analytics I
INTL 302	Advanced Analytics II
INTL 311	US Intelligence Successes and Failures
INTL 312	America's Drone Campaign Since 9/11
INTL 401	Intelligence Support to Military Operations
INTL 402	The Military Instrument of Power
INTL 464	Intelligence Internship
INTL 465	Special Topics in Intelligence
PSCI 332	National Security Policy
PSCI 342	International Terrorism
PSCI 433	US National Intelligence

*Total Hours Required:* 15, of which 9 must be completed at The Citadel

For further information, please contact the Department of Intelligence and Security Studies.

### **Minor in International and Military Affairs**

#### *Objectives:*

This minor is designed to introduce students to the field of international and military affairs and provide them with a greater understanding of the international environment in which individuals, states, and organizations operate. The minor will include an introduction to international and comparative politics as well as at least one regional area of the international system. The program's flexibility allows students to expand their introduction to this topic through the completion of two electives in regional studies, macro-based political views of the international system, international economics, national security, foreign policy, or some combination of these categories.

#### *Competence, Knowledge, or Skills to be Achieved:*

The minor will require students to acquire and apply critical analytical skills in order to achieve an understanding of the international system and its complex array of components. The required courses in international and comparative politics require students to consider the functions and components

of the international system as well as the ideological and political differences between individuals, states, and organizations which comprise this system. A regional course requirement presents students with a more detailed analysis of how other states govern themselves and operate within the international system. The electives allow students to apply their newly developed tools for international and military affairs analysis to other geographical regions, macro-based political issues such as international law or organization, or international economics. Critical thinking and systematic analysis in the required courses and electives will present students with these tools for further dissection of the international system, allow a greater appreciation for the complex world we live in, and prepare them for military, political, legal, or business careers in an ever-increasingly interdependent world.

**This minor is not approved for students majoring in political science.**

*Structure of the Minor:*

1. *Required Courses*

PSCI 231	International Politics
PSCI 232	Comparative Politics

Any regional course

2. *Electives (choose three, 1 of which must be a regional course)*

BADM 320	International Business
PSCI 331	Introduction to International Law
PSCI 332	National Security Policy
PSCI 333	International Organization
PSCI 334	Problems in International Law and Organization
PSCI 335	Comparative Foreign and Defense Policies
*PSCI 336	Russia and the Commonwealth of Independent States
*PSCI 337	East Asian Affairs
*PSCI 338	Southeast Asian Affairs
*PSCI 339	Middle East Affairs
*PSCI 340	Latin American Affairs
*PSCI 341	African Affairs
PSCI 342	International Terrorism
PSCI 343	Introduction to Non-Western Studies
*PSCI 344	European Affairs
*PSCI 345	South Asian Affairs
PSCI 346	Multinational Peacekeeping
PSCI 348	Theories of Peace and War
PSCI 351	International Political Economy
PSCI 352	Global Democracy
PSCI 353	International Economic and Development Institutions
PSCI 431	American Foreign Relations
PSCI 433	Topics in International Politics

PSCI 498	Independent Study
PSCI 499	Internship
CRMJ 384	International Crime

\*Regional Course

*Total Hours Required:* 15, of which 9 must be completed at The Citadel

For further information, please contact the Department of Political Science.

### **Minor in International Criminal Justice**

*Objectives:*

This minor is designed to provide students with an introduction to international crime and criminal justice issues, including transnational crime, drug trafficking, and global terrorism, and the organizations, laws, and justice practices dedicated to the prevention and control of international criminal activity.

*Competencies, Knowledge, or Skills to be Achieved:*

The minor introduces the student to essential concepts in the study of crime and criminal justice in a global context. This includes the critical analysis of the theories, organizations, laws, procedures, and practices related to multi-national crime and criminal justice responses. Additionally, the minor seeks to develop the student's ability to engage in critical thinking in relation to international crime and allied issues.

**This minor is not approved for students majoring in Criminal Justice.**

*Structure of the Minor:*

1. *Required Courses*

CRMJ 382	Drugs and Crime
CRMJ 383	Comparative Criminal Justice Systems
CRMJ 384	International Crime
PSCI 342	International Terrorism

2. *Electives (choose one)*

CRMJ 333	Immigration and Security
CRMJ 389	Criminal Justice in Latin America
PSCI 331	International Law
PSCI 343	Introduction to Non-Western Studies

*Total Credit Hours Required:* 15, of which at least 9 must be completed at The Citadel.

For further information, please contact the Department of Criminal Justice and/or the Department of Political Science.



### Minor in International Relations

**I. Statement of Purpose:** The minor in International Relations is a multidisciplinary concentration of courses and academic experiences that seeks to prepare students to be more informed citizens and more effective leaders of an increasingly transnational world.

**II. Administration:** The minor in International Relations is supervised by a Steering Committee that consists of one representative from each of the constituent departments within the minor. Each department will choose its representative on the Steering Committee. In consultation with the committee, the Dean of Humanities and Social Sciences will appoint one of its members to serve as overall Director of the Minor. The Director and the Steering Committee will meet at least once each semester (fall and spring) to plan activities related to, and set appropriate policies for, the minor. The Director will have primary responsibility for administering those activities and policies, will serve a term of three years, and may be renewed by the Dean for an additional term with the advice and consent of the Steering Committee. Directors will submit annual reports on the minor to the Dean of the School of Humanities and Social Sciences.

**III. Curriculum:** Students must meet the specified requirements in each of the categories outlined below. Courses used to satisfy elective requirements in a student's major may also be used to satisfy elective requirements in the minor in International Relations. Students must achieve a cumulative grade point average of at least 2.0 on all courses taken to satisfy the requirements for the minor in International Relations.

**(A) History/Geography** (6 hours). Any two of the following courses.

- HIST 206 (417): History of the Non-Western World
- HIST 326 Europe since 1914
- HIST 332 (424): History of Modern Russia
- HIST 358 (463): History of Modern China
- HIST 360 (466): History of Japan
- HIST 362 Modern Middle East
- HIST 364 Arab-Israeli Conflict
- HIST 388 U.S. Foreign Relations since 1898
- HIST 389 The Global Cold War, 1917-1991
- GEOG 209: World Geography
- OTHER: Any Special Topics Course, Independent Study Project, or Academic Internship whose primary focus is International Relations and which is approved by the Director of the Program.

**(B) Modern Language** (6 hours) Students must demonstrate proficiency through the third year (302) level—i.e. six hours above the college's core

requirement—in a language other than English. The Department of Modern Languages offers optional placement testing each fall for entering students who desire bypass credit for elementary and intermediate courses. Mastery of a second language greatly advances scholarship and professional competence in international affairs. Students are, therefore, encouraged to take additional language courses if possible.

**(C) Political Science/Business Administration** (6 hours).

One of the following courses:

- BADM 201: Principles of Macroeconomics
- BADM 320: International Business
- PSCI 351: International Political Economy

One of the following courses:

- PSCI 231: International Politics
- PSCI 232: Comparative Politics
- PSCI 331: International Law
- PSCI 333: International Organization
- PSCI 335: Comparative Foreign and Defense Policies
- PSCI 342: International Terrorism
- PSCI 343: Introduction to Non-Western Studies
- PSCI 346: Multinational Peacekeeping
- PSCI 348: Theories of War and Peace
- PSCI 352: Global Democracy
- PSCI 353: International Economic and Development Institutions
- PSCI 431: American Foreign Relations
- OTHER: Any Special Topics Course, Independent Study Project, or Academic Internship whose primary focus is International Relations and which is approved by the Director of the Program.

**IV. Study Abroad or Internship:** As part of their prescribed work, students who minor in International Relations are required to complete successfully at least one of the following two academic experiences:

**(A) Study Abroad:** a formal study abroad program of at least four weeks in duration. The Department of Modern Languages has scholarship monies available for highly qualified applicants to its Summer Studies in France and Spain/Latin America, and for study at the Goethe Institute in Germany. Moreover, Citadel Summer Scholarships are available to students posting a 3.5 GPA or better.

**(B) Internship in International Relations:** an academic internship in some aspect of international relations with an appropriate agency, business, or institution. Examples include: the U.S. Department of State, the U.S. International Trade Commission, the U.S. Congress, the Council on Foreign Relations, the Atlantic Council, and the domestic or overseas offices of international corporations.

Students must submit their proposals to study abroad or to undertake internships in advance to the Director of the program for his or her approval. No student will be allowed to receive credit for these exercises without the approval of the Director.

**V. Declaration of Minor:** Students who wish to earn the minor in International Relations must file a declaration of intent with the Director of the Program by the beginning of their junior year. This declaration must outline the projected course of study and be approved by the Director.

*Total Credit Hours Required:* 18, at least 9 of which must be completed at The Citadel.

For further information, please contact the Department of History.

### Minor in Law and Legal Studies

#### *Objectives:*

This minor is designed to introduce students in a systematic way to the American systems of civil and criminal justice; to provide an introduction to law and the legal system for students who are considering careers in law or criminal justice; and to provide an opportunity for students to undertake advanced law-related courses, grounded in a basic understanding of law and the legal system.

#### *Competencies, Knowledge, or Skills to be Achieved:*

The minor introduces students to legal reasoning, to case analysis, and to legal terms and citations as well as theoretical matters. Aside from an understanding of the nature of the legal process, the minor seeks to develop each student's capabilities for critical thinking and systematic analysis.

**This minor is not approved for students majoring in political science or criminal justice.**

#### *Structure of the Minor:*

##### 1. *Required Courses*

- CRMJ 201 Introduction to Criminal Justice
- PSCI 361 Law and Legal Process
- PSCI 462 Constitutional Law: Civil Rights and Liberties

##### 2. *Electives (choose two)*

- PSCI 331 International Law
- PSCI 392 Political Theory
- PSCI 402 Politics of Bureaucracy
- PSCI 461 Issues in Contemporary Constitutional Law
- PSCI 463 Topics in Law and Legal Studies
- PSCI 499 Internship
- CRMJ 202 Criminology
- CRMJ 371 Criminal Law
- CRMJ 373 Criminal Evidence

SOCI 201 Introduction to Sociology

ENGL 411 Writing in the Professions

*Total Credit Hours Required:* 15, of which 9 must be completed at The Citadel

For further information, please contact the Department of Criminal Justice and/or the Department of Political Science.

### Minor in Leadership Studies

The minor in Leadership Studies consists of courses from the Department of Leadership Studies and a number of other academic departments. The minor highlights and reinforces the centrality of leadership in the Citadel experience. The minor in Leadership Studies is intended for students who wish to supplement their study with a scholarly consideration of the subject of leadership, as applied to their major field. Leadership Scholars will undertake a minor in Leadership Studies.

#### *Objectives:*

The minor in Leadership Studies addresses learning concepts and critical thinking about leadership from various analytical perspectives and, as a result, gives students a broad understanding of the nature of effective, ethical leadership. This minor complements the “leadership laboratory” aspect of cadet life and the development of leadership skills gained through required leadership courses at The Citadel. The minor focuses on building an understanding of the nature and concepts of leadership through interdisciplinary study employing historical, political, literary, psychological, and organizational approaches to the subject. Whereas ROTC courses and participation in the structured, hierarchical regimen of the Citadel Corps of Cadets teach the students discipline, perseverance, respect for authority, and the ability to lead, the minor in Leadership Studies builds on those practical experiences with a scholarly focus on the subject. Looking at the dynamics and theoretical models of leadership, the various courses examine leadership questions and challenges, not only with respect to effectiveness, but also in their ethical aspects—such as diversity and inclusion, power dynamics, and questions of duty versus individual responsibility.

#### *Structure of the Minor:*

The minor in Leadership Studies consists of five courses (15 credit hours total) — BADM/LDRS 371, Leadership in Organizations; two academic electives from the schools/ departments of Education; English; History; Leadership Studies; Health and Human Performance; Political Science; and Psychology; one experiential course in leadership; and LDRS 401, Senior Leadership Seminar/Project.

#### Required Courses (6 hours)

- |               |  |
|---------------|--|
| LDRS/BADM 371 | Leadership in Organizations (cross-listed) |
| LDRS 104      | Senior Leadership Seminar/Project          |

**Academic Electives (Choose 2 for a total of 6 hours)**

EDUC 330	Developing Leadership Skills through Peer Counseling
ENGL 371	Literary Paradigms of Leadership
HIST 371	Historical Studies in Leadership
HIST 382	History of Military Leadership
LDRS 320	Leadership Communications
LDRS 433	Special Topics in Leadership
NURS 404	Nursing Leadership
PESM 404	Leadership in Health, Exercise, and Sport Science Organizations
PHIL 290	Ethics
PSCI 371	Leadership in Politics
PSCI 305	American Presidency
PSCI 306	Legislative Process
PSYC 371	Psychology of Leadership

**Experiential Course in Leadership (Choose 1 for a total of three hours):**

LDRS 433(2) - Special Topics in Leadership – Leadership in Community Engagement

Experiential courses in Leadership may include Internships, Study Away, Service Learning, or Faculty-directed research. Students must submit proposals to undertake and apply Experiential Courses towards the leadership minor degree to the Department of Leadership Studies for advanced approval. A complete list eligible experiential course is available in the Department of Leadership Studies.

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel.

For further information, please contact the Department of Leadership Studies.

**Minor in Management Information Systems***Objectives:*

A minor in management information systems provides an interdisciplinary opportunity for students to learn how to use computer technology to manage information as a competitive business or organizational asset.

*Competencies, Knowledge, or Skills to be Achieved:*

A student who completes the minor will have developed a basic competency in current distributed, database-driven information systems and techniques. The minor emphasizes fundamental programming skills, database skills, business management skills, and hands-on experience applying those skills to computer-

related projects that support business operations and management decisions.

*Structure of the Minor:*

## 1. Required courses: (12 credit hours)

CSCI 216	Introduction to Programming and Databases
CSCI 217	Web Resources and Design
CSCI 320	Database Design
BADM 417	Management Information Systems

## 2. Electives (3 credit hours)

BADM 217	Computer Applications in Business
<b>or</b> BADM 427	Accounting Information Systems

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel

For further information, please contact the Department of Mathematics and Computer Science.

**Minor in Mechanical Engineering***Objectives:*

The minor in mechanical engineering is designed to allow the student with quantitative and scientific aptitudes and interests to acquire a basic level of competence in one of four fields of mechanical engineering.

*Competencies, Knowledge, or Skills to be Achieved:*

A student who completes this minor will have the opportunity to develop a basic competency in mechanical engineering, apply basic engineering principles to another field, stimulate creative thinking, and develop problem-solving skills. Through the elective field of emphasis, the student will achieve additional knowledge or skill in one of the functional areas: power and energy, mechatronics, manufacturing, or composites.

*Structure of the Minor:*

## 1. Required courses: (6 credit hours)

CIVL 202	Statics
CIVL 203	Dynamics

## 2. Elective Fields of Emphasis:

## Energy: (12 credit hours)

MECH 310	Thermo-Fluids I w/lab
MECH 311	Thermo-Fluids II w/lab
MECH 365	Computational Methods in Engineering
MECH 415	Heat Transfer

**OR**

## Mechatronics: (16 credit hours)

ELEC 201	Electric Circuit Analysis I
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ELEC 202	Electric Circuit Analysis II
ELEC 204	Electrical Laboratory
MECH 330	Measurements and Instrumentation w/lab
MECH 350	Modeling and Analysis of Dynamic Systems
MECH 450	Mechatronics w/lab

**OR**

Manufacturing: (16 credit hours)

CIVL 304	Mechanics of Materials
CIVL 307	Materials Laboratory
MECH 304	Engineering Materials w/lab
MECH 340	Manufacturing Processes w/lab
MECH 345	Machine Design
MECH 460	Mechanical Engineering Systems Design

**OR**

Composites: (16 credit hours)

CIVL 304	Mechanics of Materials
CIVL 307	Materials Laboratory
MECH 304	Engineering Materials w/lab
MECH 340	Manufacturing Processes w/lab
MECH 404*	Advanced Materials
MECH 408*	Composite Design
MECH 409*	Composite Manufacturing w/lab

\* Choice of 2 from MECH 404, MECH 408, and MECH 409

*Total Credit Hours Required* - 18 (Energy Track)

22 (Mechatronics Track)

22 (Manufacturing Track)

22 (Composites Track)

*At least 9 credit hours must be completed at The Citadel.*

For further information, please contact the Department of Mechanical Engineering.

**Minor in Molecular Biology and Biochemistry**

The Departments of Biology and Chemistry offer a joint minor in Molecular Biology and Biochemistry. This minor will be beneficial to students interested in careers in medicine, dentistry, and other health science fields as well as those who wish to pursue careers in the chemical and biochemical industry. Active learning exercises, use of scientific literature, computer modeling, inquiry-based laboratories, and research are important components of the courses in the sequence. Requirements for the minor vary slightly depending on the student's major. The following courses are prerequisites for the minor: BIOL 130/131 and 140/141; CHEM 151/161, 152/162, 207/217, and 208/218.

**Requirements for Students Majoring in Biology**

BIOL 424	Molecular Genetics
BIOL or CHEM 429	Literature Seminar
CHEM 409	Biochemistry I
CHEM 410	Biochemistry II
CHEM 460	Biochemistry Laboratory
BIOL 290	Microbiology
or	
CHEM 300	Quantitative Analysis

**Requirements for Students Majoring in Chemistry**

BIOL 308	Genetics
BIOL 424	Molecular Genetics
BIOL or CHEM 429	Literature Seminar
CHEM 409	Biochemistry I
CHEM 410	Biochemistry II
CHEM 460	Biochemistry Laboratory

**Requirements for All Other Majors**

BIOL 308	Genetics
BIOL 424	Molecular Genetics
BIOL or CHEM 429	Literature Seminar
CHEM 409	Biochemistry I
CHEM 410	Biochemistry II
CHEM 460	Biochemistry Laboratory

*Total Credit Hours Required:* 16 credit hours, 9 of which must be completed at The Citadel

For further information, please contact the Department of Biology or Department of Chemistry.

**Minor in Non-Western Studies***Objectives:*

The minor in non-Western studies is designed to allow students to develop a multidisciplinary, directed course of study through which they will attain a well-rounded understanding of a regional (Asia, Middle East, Africa, Latin America) or functional (e.g., development, revolution) area.

*Competencies, Knowledge, or Skills to be Achieved:*

In addition to the above, students will have an opportunity to develop keener insight and appreciation for diversity. This program will not only allow minority students to learn about their origins, but will (perhaps more importantly) engage all students to widen their horizons. In addition, this specialization will prove

especially beneficial for the student pursuing a graduate degree in such areas as International Business, International Studies, Comparative Literature, History, etc. It will also distinguish students entering military or other government service.

No students are excluded from pursuing this minor. A student may not, however, use any course toward satisfying both the minor requirement and a specific or area requirement in his or her major.

*Administration:* The minor in Non-Western Studies is supervised by a Steering Committee that consists of one representative from each of the constituent departments within the minor. Each department will choose its representative on the Steering Committee. In consultation with the committee, the Dean of Humanities and Social Sciences will appoint one of its members to serve as overall Director of the Minor. The Director and the Steering Committee will meet at least once each semester (fall and spring) to plan activities related to, and set appropriate policies for, the minor. The Director will have primary responsibility for administering those activities and policies, will serve a term of three years, and may be renewed by the Dean for an additional term with the advice and consent of the Steering Committee. Directors will submit annual reports on the minor to the Dean of the School of Humanities and Social Sciences.

*Structure of the Minor:*

1. *Required Courses*

Foreign language through the 202 level (equivalent to 12 hours); Introduction to Non-Western Studies (PSCI 343) (3 hours)

2. *Electives*

Four of the following from at least two disciplines:

HIST 206	PSCI 335	GEOG 311	CRMJ 383
HIST 357	PSCI 337	ANTH 202	CRMJ 384
HIST 358	PSCI 338	SPAN 303	
HIST 361	PSCI 339	SPAN 304	
HIST 362	PSCI 340	SPAN 320	
HIST 365	PSCI 341	FREN 303	
HIST 387	PSCI 342	FREN 304	
	PSCI 345	GERM 303	
	PSCI 433	GERM 304	

Other: relevant Independent Study in any discipline; approved Senior Research Project or Internship; any relevant course taught by departments as a special topic; any relevant literature and/or language course (Asian, African, Latin American, or Middle East).

3. *Projected Course of Study:*

Students will be required to file a declaration of intent with the Director of the program by the end of the first semester of the junior year. This declaration will outline the projected course of study and will be approved

by the Director. In addition to approving this projected course of study, the Director will assume responsibility for publicizing the program and for monitoring each student's progress toward fulfilling the requirements of the minor; in this latter capacity, the Director will be responsible for verifying that the student has met the requirements of the minor and for notifying the Records Office to that effect.

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel (plus 12 of language).

For further information, please contact the Department of Political Science.

### Minor in Philosophy

The minor in Philosophy, consisting of four courses in Philosophy and a fifth course drawn from a designated group of related courses in various disciplines, is designed to give students (1) an introduction to the history of philosophy and major issues in philosophy (accomplished in PHIL 201), (2) a grounding in major approaches to critical thinking (PHIL 202), (3) advanced study in selected areas of philosophy (provided by at least two Philosophy courses), and (4) the collateral connection provided by at least one related course in another discipline.

*Structure of the Minor:*

To earn a minor in Philosophy, a student must complete fifteen (15) credit hours of course work, distributed as follows:

- I. Required Basic Courses. Both courses must be completed; total of six hours credit;
  - a. PHIL 201 Introduction to Philosophy
  - b. PHIL 202 Reasoning and Critical Thinking (Logic)
- II. Philosophy Electives. Any two of the following four courses must be completed; total of six hours credit:
  - a. PHIL 290 Ethics
  - b. PHIL 302 Philosophy of Religion
  - c. PHIL 409 Seminar in Philosophical Topics
  - d. PHIL 410 Man in Crisis: The Problems of Good and Evil
- III. Upper-division Electives. One of the following courses must be completed; total of three hours credit:
  - a. BADM 305 Legal & Ethical Environment of Business
  - b. ENGL 371 Literary Paradigms of Leadership
  - c. ENGL 407 Principles of Literary Criticism
  - d. ENGL 426 Creative Writing: Fiction
  - e. ENGL 427 Creative Writing: Poetry
  - f. HIST 321 The Middle Ages
  - g. HIST 322 Renaissance and Reformation
  - h. HIST 329 The Ancient Greeks
  - i. HIST 361 Early Islamic History
  - j. HIST 362 Modern Middle East
  - k. LING 300 Introduction to Linguistics
  - l. MLNG 410 European Literary Movements, 12th Century to 1789

- m. MLNG 411 European Literary Movements, 1789-Present
- n. PSCI 304 American Political Thought
- o. PSCI 348 Theories of Peace and War
- p. PSCI 371 Leadership in Politics
- q. PSCI 392 Political Theory
- r. PSYC 305 Social Psychology
- s. PSYC 306 Theories of Personality
- t. PSYC 403 Psychology of Learning
- u. PSYC 405 History and Systems of Psychology
- v. A special topics course or independent study (any department) approved by the Department Head of English, Fine Arts, and Communications as suitable for the Philosophy Minor.

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel.

For further information, please contact the Department of English, Fine Arts, and Communications.

### Minor in Psychology

#### *Objectives:*

The Psychology Department recognizes that students from many diverse fields and areas of interest (e.g., business administration, pre-law, pre-med, education, law enforcement, and the military) may benefit from more in-depth knowledge of the behavioral sciences. The minor in psychology is designed to allow students maximum flexibility in choosing courses to complement their current major.

#### *Competencies, Knowledge or Skills to be Achieved:*

Students minoring in psychology have the opportunity to enhance their critical thinking and problem-solving skills. Students will also develop the ability to review the scientific literature and communicate their findings through multiple media (oral presentations, written papers, and paper presentations at conferences). The curriculum for the minor has been arranged to maximize the flexibility needed to match the student's individual career goals while at the same time ensuring a knowledge of the broad areas of psychology.

**This minor is not approved for students majoring in psychology.**

#### *Structure of the Minor:*

##### 1. *Required Courses: (10 credit hours)*

- PSYC 201 General Psychology
- PSYC 203 Research Design in Psychology
- PSYC 303 Experimental Psychology

##### 2. *Electives: (6 credit hours)*

Choose two additional Psychology courses.

*Total Credit Hours Required:* 16, 9 of which must be completed at The Citadel.

For further information, please contact the Department of Psychology.

### Minor in Southern Studies

**I. Statement of Purpose:** The minor in Southern Studies is a multidisciplinary concentration of courses and academic experiences that seeks to promote a better understanding of the American South and, thereby, to prepare students to be more responsible citizens and more effective leaders of that increasingly important region of the United States.

**II. Administration:** The minor in Southern Studies is supervised by a Steering Committee that consists of one representative from each of the constituent departments within the minor. Each department will choose its representative on the Steering Committee. In consultation with the committee, the Dean of Humanities and Social Sciences will appoint one of its members to serve as overall Director of the Minor. The Director and the Steering Committee will meet at least once each semester (fall and spring) to plan activities related to, and set appropriate policies for, the minor. The Director will have primary responsibility for administering those activities and policies, will serve a term of three years, and may be renewed by the Dean for an additional term with the advice and consent of the Steering Committee. Directors will submit annual reports on the minor to the Dean of the School of Humanities and Social Sciences.

**III. Curriculum:** To earn the minor in Southern Studies, students must complete 18 hours of course work from the menu provided below. Students must take at least one course in each of the three designated departments. Students may count no more than three courses in any one of the departments toward the requirements for the minor. Courses used to satisfy elective requirements in a student's major may also be used to satisfy elective requirements in the minor in Southern Studies. Students must achieve a cumulative grade point average of at least 2.0 on the courses taken to satisfy the requirements for the minor in Southern Studies.

#### (A) English

- ENGL 338: African American Literature to 1940
- ENGL 339: African American Literature 1940 to the Present
- ENGL 340: Southern Literature to 1900
- ENGL 348: Twentieth Century Southern Literature
- OTHER: Any Special Topics Course, Independent Study Project, or Academic Internship whose primary focus is the American South and which is approved by the Director of the program.

#### (B) History

- HIST 304: The Civil War
- HIST 309 (402): South Carolina History
- HIST 312 (409): The Modern Civil Rights Movement
- HIST 316 (406): The Old South
- HIST 317 (407): The New South

OTHER: Any Special Topics Course, Independent Study Project, or Academic Internship whose primary focus is the American South and which is approved by the Director of the program.

**(C) Political Science and Criminal Justice**

PSCI 307: Southern Politics

PSCI 311: The Civil Rights Movement and American Politics

OTHER: Any Special Topics Course, Independent Study Project, or Academic Internship whose primary focus is the American South and which is approved by the Director of the program.

**IV. Internship or Independent Research Project:** As part of the 18 hours of course work, students minoring in Southern Studies are required to complete successfully at least one of the following two academic experiences:

**(A) Internship in Southern Studies:** an academic internship in some aspect of southern studies with an appropriate agency or institution. Examples include: the South Carolina Historical Society; the Historic Charleston Foundation; the Charleston Museum; and the offices of federal, state, and local government.

**(B) Independent Research Project:** on a topic dealing with the American South. The research project should lead to a paper of approximately thirty (30) pages in length that is based on both primary and secondary sources and directed by a professor with expertise in the subject under investigation. The paper must be read and approved by, and defended before, faculty members from two different departments with expertise in the area of study.

Students must submit their proposals to undertake internships or independent study projects in advance to the Director of the program for his or her approval. No student will be allowed to receive credit for these exercises without the approval of the Director.

**V. Declaration of Minor:** Students who wish to earn the minor in Southern Studies must file a declaration of intent with the Director of the program by the beginning of their junior year. This declaration must outline the projected course of study and be approved by the Director.

*Total Credit Hours Required:* 18 at least 12 of which must be completed at The Citadel.

For further information, please contact the Department of History.

### Minor in Sport Coaching

*Objectives:*

The minor in sport coaching is designed to develop the skills, knowledge and leadership qualities necessary to become an effective coach at the youth and inter-scholastic levels. Focus will be on content knowledge, teaching and communication of skills and tactics, developing a sound coaching philosophy, safe and appropriate practice in a physically active environment, and qualities for successful leadership.

*Competencies, Knowledge, or Skills to be Achieved:*

The minor in sport coaching provides students in all majors the opportunity to pursue their interest in coaching, sport, and working with youth in a physically active environment. Students will gain knowledge of how skilled performance is learned and how technology can be used to improve performance in a variety of sports. Students will be able to demonstrate and explain a variety of sport skills and tactics, develop practice plans, and apply principles and techniques of strength and conditioning.

*Structure of the Minor:*

Required Courses: (12 credit hours)

EXSC 200 Motor Learning and Motor Development

PHED 201 Introduction to PE and Coaching

PHED 350 Advanced Performance and Athlete Development Part 1

PHED 460 Advanced Performance and Athlete Development Part 2

Choose one elective from the list below:

HLED 401 Nutrition

HLED 402 Sport Nutrition

EXSC 202 Care and Prevention of Athletes

EXSC 315 Strength and Condition Techniques

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel

For further information, please contact the Department of Health and Human Performance.

### Minor in Sport Management

#### *Objectives:*

The minor in Sport Management is designed to allow a student to enhance his/her marketability and to increase his/her knowledge and experiences in specific areas of Sport Business. Selective courses will also provide a student in the Sport Management Minor with an opportunity to delve more deeply into one of the business areas of sport, the Management aspect.

#### *Competencies, Knowledge or Skills to be Achieved:*

Basic aspects of knowledge to enter a professional field. In addition, students will be taught and provided knowledge and concepts in subfields of sport as well as exercise/fitness. Finally, the practical component of the Minor will provide a “hands on” approach and minimal training, a necessary component of Sport Management highly valued by the industry.

#### *Structure of the Minor:*

**The Minor in Sport Management consists of 5 courses. A student interested in a Minor in Sport Management must take 4 of the following 5 Sport Management courses:**

- PESM 301 Sport Governance
- PESM 304 Sport Marketing
- PESM 401 Legal Aspects of Sport
- PHED 404 Administration in Health, Exercise, and Sport Science
- PESM 402 Sport Sales

In addition, all students interested in a Minor in Sport Management must complete the required course PHED 406, Field Experience, which is a minimum practical application of knowledge related to the field.

**NOTE: A student majoring in Health/Wellness interested in a Minor in Sport Management must complete PHED 406, Field Experience, twice; once for the Health/Wellness requirement and once for the Minor in Sport Management.**

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel.

For further information, please contact the Department of Health and Human Performance.

### Minor in Sustainability and Environmental Studies

#### *Objectives:*

The minor in sustainability and environmental studies is an interdisciplinary minor designed to help undergraduate students gain environmental science literacy; develop an understanding of the environment and an appreciation of sustainability from a variety of perspectives such as business and engineering; and create and/or participate in a project related to local environmental and sustainability efforts. Students pursuing the minor will have the opportunity to take a variety of classes addressing sustainability and environmental studies culminating in a capstone course. The capstone course will provide the students a chance to build upon their previous coursework in the minor through a semester long research project, service-learning activity or internship.

#### *Potential Students:*

The minor may be appropriate for undergraduate students from all five schools who are interested in the environment and sustainability. Possible areas of interest could include sustainable agriculture, environmental degradation, supply chain sustainability, environmental history or environmental economics.

#### *Requirements:*

To complete a minor in sustainability and environmental studies, students must take a minimum of 15 credit hours from the approved list of courses listed below.

#### **REQUIRED COURSES:**

Must take both of the following:

- BIOL 209: Environmental Science (1st course)
- Capstone Course: Including EDUC 409: Service Learning in Environmental and Sustainability Studies, BIOL 320: Intern Research, or similarly approved high-impact experiences.

#### **OPTIONAL COURSES:**

Must take **THREE** of the following:

- BADM 323 – Quality Management
- BADM 324 – Purchasing and Materials Management
- BADM 329 - Project Management
- BADM 409 – Human Resource Management
- CIVL 322 – Introduction to Environmental Engineering
- CIVL 408 – Water and Wastewater Systems



MECH 417 – Renewable Energy  
 ELEC 427 – Energy Systems Engineering  
 HIST 392 – Special Topics in History\*\*\* (Environmental History)  
 PSCI 433 – Special Topics in International Politics\*\*\* (Global Environment)  
 BIOL 314 – The Vascular Flora of South Carolina  
 BIOL 406 – Ecology  
 BIOL 407 – Conservation Ecology  
 BIOL 409 – Marine Biology  
 BIOL 414 – Environmental Physiology  
 BIOL 419 – Economic Botany  
 BIOL 412 –Special Topics in Biology\*\*\*  
 BIOL 421 – Toxicology  
 BIOL 426 – Freshwater Biology  
 PHYS 243 – Meteorology  
 PHYS 301 – Biological Physics  
 PHYS 343 – Applied Climatology  
 EART 201 – Earth Science for Educators  
 EDUC 409 – Special Topics in Education\*\*\*

\*note only one course can be counted for both a major and a minor

\*\*CIVL 322 and CIVL 408 can be appropriate for non-CE STEM majors. These non-CE STEM majors must complete CHEM 151/161 as a pre-requisite for CIVL 322 and CIVL 322 as a prerequisite for CIVL408. The CE department must be notified prior to attempting registration to open the course to non-CE STEM majors.

\*\*\*Special Topics Courses will require approval from the Program Director on a case-by-case basis.

*Total Credit Hours Required:* 15, at least 9 of which must be completed at The Citadel.

For further information, please contact the Department of Biology.

## Courses of Study

The following pages contain a detailed schedule of the curriculum required for each degree according to the major subject selected. The clock hours and the credit value of each course are noted. The individual courses are described under the appropriate departmental heading in the pages following the schedules.

Geography courses are offered in the Department of History; philosophy courses in the Department of English, Fine Arts, and Communications; computer science courses in the Department of Mathematics and Computer Science, sociology courses in the Department of Criminal Justice, and anthropology courses in the Department of Political Science.

Major work is offered in the following areas: accounting; biology; business; chemistry; civil engineering; construction engineering; computer science; criminal justice; education; electrical engineering; English; health, exercise, and sport science; history; intelligence and security studies; mathematics; mechanical engineering; modern languages; nursing; physics; political science; psychology. A thorough premedical preparation is also available through the B.A. Chemistry or the B.S. Biology.

**ACCOUNTING**  
**First Semester**

FRESHMAN YEAR				
Composition and Literature .....	ENGL	101	3	(3,0)*
Elementary Mathematical Modeling.....	MATH	104***	3	(3,0)
Introduction to Business .....	BADM	101	3	(3,0)
Business Computer Applications .....	BADM	110	3	(3,0)
Modern Language .....			3	(3,0)
+1st Year Basic ROTC.....				
Required Physical Education .....	RPED	250	2	(2,0)
First Year Seminar.....	LDRS	101	1	(2,0)

SOPHOMORE YEAR

Biology, Chemistry, or Physics .....			4	(3,2)
**Major British Writers .....	ENGL	201	3	(3,0)
**Principles of Microeconomics .....	BADM	202	3	(3,0)
Modern Language .....			3	(3,0)
Introduction to Managerial Accounting.....	BADM	212	3	(3,0)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

JUNIOR YEAR

Biology, Chemistry or Physics.....			4	(3,2)
**Operations Management.....	BADM	310	3	(3,0)
Intermediate Financial Accounting I.....	BADM	300	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Managerial Accounting.....	BADM	302	3	(3,0)
Legal and Ethical Environment of Business .....	BADM	305	3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

SENIOR YEAR

Leadership in Organizations .....	BADM	371	3	(3,0)
Auditing and Assurance Services.....	BADM	416	3	(3,0)
Accounting Information Systems .....	BADM	427	3	(3,0)
Commercial Law.....	BADM	318	3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*May be taken in either semester.

\*\*\*See page 114 for more choices

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**ACCOUNTING**  
**Second Semester**

FRESHMAN YEAR				
Composition and Literature .....	ENGL	102	3	(3,0)
Statistical Methods.....	STAT	160	3	(3,0)
Intro to Fin. Acct. and Reporting .....	BADM	211	3	(3,0)
**Principles of Macroeconomics.....	BADM	201	3	(3,0)
Modern Language .....			3	(3,0)
+1st Year Basic ROTC.....				
Required Physical Education .....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)

SOPHOMORE YEAR

Biology, Chemistry, or Physics .....			4	(3,2)
**Communications in Business .....	COMM	216 <sup>^</sup>	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Modern Language .....			3	(3,0)
**Applied Business Statistics .....	BADM	206	3	(3,0)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)

JUNIOR YEAR

Biology, Chemistry or Physics.....			4	(3,2)
**Marketing Principles.....	BADM	309	3	(3,0)
Intermediate Financial Accounting II .....	BADM	301	3	(3,0)
Business Finance.....	BADM	321	3	(3,0)
Management and Organizational Behavior....	BADM	338	3	(3,0)
**English, American, or World Literature.....	ENGL****		3	(3,0)
+1st Year Advanced ROTC.....				

SENIOR YEAR

**Strategic Management .....	BADM	422	3	(3,0)
**Social Science Core Course .....			3	(3,0)
Advanced Financial Accounting .....	BADM	402	3	(3,0)
Federal Taxation.....	BADM	419	3	(3,0)
**Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

**CPA Certification**

*Many states and jurisdictions, including South Carolina, require 150 semester hours of education, in both accounting and non-accounting courses, to qualify for CPA certification. The requirements for licensure vary from state to state. Please check with the State Board of Accountancy of the state in which you wish to practice to determine the requirements to sit for the CPA exam and to be licensed as a CPA.*

\*\*\*\*ENGL 202, 215, 218, or 219

<sup>^</sup> May take BADM 216 or COMM 216.

HOURS REQUIRED FOR GRADUATION: 129 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**BIOLOGY MAJOR**  
**First Semester**

<b>FRESHMAN YEAR</b>				
Introduction to Biology II .....	BIOL	140	3	(3,0)*
Introduction to Biology II Laboratory .....	BIOL	141	1	(0,3)
General Chemistry I.....	CHEM	151	3	(3,0)
General Chemistry I Laboratory .....	CHEM	161	1	(0,2)
Composition and Literature .....	ENGL	101	3	(3,0)
Social Science Elective .....			3	(3,0)
First Year Seminar.....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)
+1st Year Basic ROTC .....				

**SOPHOMORE YEAR**

Evolution.....	BIOL	208	3	(3,0)
Organic Chemistry I.....	CHEM	207	3	(3,0)
Organic Chemistry I Laboratory .....	CHEM	217	1	(0,3)
Major British Writers .....	ENGL	201	3	(3,0)
Applied Calculus I .....	MATH	106***	3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)
Elective .....			3	(3,0)

**JUNIOR YEAR**

Genetics.....	BIOL	308	4	(3,3)
College Physics I.....	PHYS	203	3	(3,0)
College Physics I Laboratory .....	PHYS	253	1	(0,2)
History of Western or World Civilization .....	HIST		3	(3,0)
A Modern Language .....			3	(3,0)
Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Biology Senior Seminar .....	BIOL	411	1	(1,0)
Biology Elective** .....	BIOL		3(4)	(var)
Biology Elective** .....	BIOL		3(4)	(var)
A Modern Language .....			3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order. Var = varies according to course.

\*\*Biology electives must include at least one course from each of the following four areas. Cell and Molecular Biology: BIOL 290, BIOL 401, BIOL 402, BIOL 424; BIOL 427; Ecology and Field Biology: BIOL 209, BIOL 314, BIOL 407, BIOL 408, BIOL 409, BIOL 425, BIOL 426; Organismal Biology: BIOL 203, BIOL 301, BIOL 302, BIOL 309, BIOL 410, BIOL 419, BIOL 421; Physiological Biology: BIOL 403, BIOL 414.

\*\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**BIOLOGY MAJOR**  
**Second Semester**

<b>FRESHMAN YEAR</b>				
Introduction to Biology I .....	BIOL	130	3	(3,0)*
Introduction to Biology I Laboratory.....	BIOL	131	1	(0,3)
General Chemistry II.....	CHEM	152	3	(3,0)
General Chemistry II Laboratory.....	CHEM	162	1	(0,2)
Composition and Literature .....	ENGL	102	3	(3,0)
Statistical Methods.....	STAT	160	3	(3,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)
+1st Year Basic ROTC .....				

**SOPHOMORE YEAR**

Cell Biology .....	BIOL	205	4	(3,3)
Organic Chemistry II .....	CHEM	208	3	(3,0)
Organic Chemistry II Laboratory.....	CHEM	218	1	(0,3)
English, American, or World Literature.....	ENGL****		3	(3,0)
Applied Calculus II .....	MATH	107***	3	(3,0)
Elective .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

**JUNIOR YEAR**

Ecology .....	BIOL	406	4	(3,4)
Biology Elective** .....	BIOL		3(4)	(var)
College Physics II .....	PHYS	204	3	(3,0)
College Physics II Laboratory .....	PHYS	254	1	(0,3)
History of Western or World Civilization .....	HIST		3	(3,0)
A Modern Language .....			3	(3,0)
+1st Year Advanced ROTC.....				

**SENIOR YEAR**

Biology Elective** .....	BIOL		3(4)	(var)
A Modern Language .....			3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

\*\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: Required hours for the biology major vary from 125 to 130 (depending on choice of biology electives), plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**BIOLOGY MAJOR****Teaching Specialization in Biology & Comprehensive/Broad Field Science****First Semester**

## FRESHMAN YEAR

Introduction to Biology II.....	BIOL	140	3	(3,0)*
Introduction to Biology II Laboratory.....	BIOL	141	1	(0,3)
General Chemistry I.....	CHEM	151	3	(3,0)
General Chemistry I Laboratory.....	CHEM	161	1	(0,2)
Composition and Literature.....	ENGL	101	3	(3,0)
Education in Modern Society.....	EDUC	101	3	(3,0)
First Year Seminar.....	LDRS	101	1	(2,0)
Required Physical Education.....	RPED	250	2	(2,0)
+1st Year Basic ROTC.....				

## SOPHOMORE YEAR

Evolution.....	BIOL	208	3	(3,0)
Major British Writers.....	ENGL	201	3	(3,0)
Applied Calculus I.....	MATH	106***	3	(3,0)
Adolescent Development.....	EDUC	206	3	(3,0)
General Psychology.....	PSYC	201	3	(3,0)
Required Physical Education.....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

## JUNIOR YEAR

Genetics.....	BIOL	308	4	(3,3)
History of Western or World Civilization I.....	HIST		3	(3,0)
College Physics I.....	PHYS	203	3	(3,0)
College Physics I Laboratory.....	PHYS	253	1	(0,2)
Learners with Exceptionalities.....	EDUC	312	3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

## SENIOR YEAR

Biology Senior Seminar.....	BIOL	411	1	(1,0)
Biology Elective**.....	BIOL		3(4)	(var)
Biology Elective**.....	BIOL		3(4)	(var)
Methods and Applications of Science.....	BIOL	330	3	(2,3)
Teaching Reading in Middle & High School....	EDUC	306	3	(3,0)
+2nd Year Advanced ROTC.....				
Senior Leadership Integration Seminar.....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order. Var = varies according to course.

\*\*Biology electives must include at least one course from each of the following four areas. Animal Physiology Area: BIOL 403, BIOL 414; Botany Area: BIOL 203, BIOL 314; Zoology Area: BIOL 301, BIOL 302, BIOL 408, BIOL 410.

\*\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or laab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**BIOLOGY MAJOR****Teaching Specialization in Biology & Comprehensive Broad Field Science****Second Semester**

## FRESHMAN YEAR

Introduction to Biology I.....	BIOL	130	3	(3,0)*
Introduction to Biology I Laboratory.....	BIOL	131	1	(0,3)
General Chemistry II.....	CHEM	152	3	(3,0)
General Chemistry II Laboratory.....	CHEM	162	1	(0,2)
Composition and Literature.....	ENGL	102	3	(3,0)
Statistical Methods.....	STAT	160	3	(3,0)
Educational Psychology.....	EDUC	202	3	(3,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
Required Physical Education.....	RPED	251	2	(2,0)
+1st Year Basic ROTC.....				

## SOPHOMORE YEAR

Cell Biology.....	BIOL	205	4	(3,3)
English, American, or World Literature.....	ENGL****		3	(3,0)
Applied Calculus II.....	MATH	107***	3	(3,0)
Foundations in Reading.....	EDUC	301	3	(3,0)
Introduction to Earth Science.....	EART	201	4	(3,3)
Required Physical Education.....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

## JUNIOR YEAR

Ecology.....	BIOL	406	4	(3,4)
Biology Elective**.....	BIOL		3(4)	(var)
College Physics II.....	PHYS	204	3	(3,0)
College Physics II Laboratory.....	PHYS	254	1	(0,3)
History of Western or World Civilization II.....	HIST		3	(3,0)
Methods & Materials-Middle & High School	EDUC	401	3	(3,0)
+1st & 2nd Year Advanced ROTC.....				

## SENIOR YEAR

Special Methods in Teaching.....	EDUC	402	3	(3,0)
Internship in Teaching.....	EDUC	499	12	

**SEE NOTE AT BOTTOM OF PAGE 187.**

\*\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: Required hours for the biology major vary from 121 to 125 (depending on choice of biology electives), plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**BUSINESS**  
**First Semester**

<b>FRESHMAN YEAR</b>				
Composition and Literature .....	ENGL	101	3	(3,0)*
Elementary Mathematical Modeling.....	MATH	104***	3	(3,0)
Business Computer Applications.....	BADM	110	3	(3,0)
Introduction to Business .....	BADM	101	3	(3,0)
Modern Language .....			3	(3,0)
+1st Year Basic ROTC.....				
Required Physical Education .....	RPED	250	2	(2,0)
First Year Seminar.....	LDRS	101	1	(2,0)
<b>SOPHOMORE YEAR</b>				
Biology, Chemistry, or Physics .....			4	(3,2)
**Major British Writers .....	ENGL	201	3	(3,0)
**Principles of Microeconomics .....	BADM	202	3	(3,0)
Modern Language .....			3	(3,0)
Introduction to Managerial Accounting.....	BADM	212	3	(3,0)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)
<b>JUNIOR YEAR</b>				
Biology, Chemistry or Physics.....			4	(3,2)*
**Legal and Ethical Environment of Business .....	BADM	305	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
**Operations Management .....	BADM	310	3	(3,0)
**Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)
<b>SENIOR YEAR</b>				
Leadership in Organizations .....	BADM	371	3	(3,0)
Business Elective .....	BADM		3	(3,0)
Business Elective .....	BADM		3	(3,0)
**Elective .....			3	(3,0)
**Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*May be taken in either semester of sophomore year.

\*\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**BUSINESS**  
**Second Semester**

<b>FRESHMAN YEAR</b>				
Composition and Literature .....	ENGL	102	3	(3,0)
Statistical Methods.....	STAT	160	3	(3,0)
Intro to Fin. Acct. and Reporting .....	BADM	211	3	(3,0)
Principles of Macroeconomics.....	BADM	201	3	(3,0)
Modern Language .....			3	(3,0)
+1st Year Basic ROTC.....				
Required Physical Education .....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
<b>SOPHOMORE YEAR</b>				
Biology, Chemistry, or Physics.....			4	(3,2)
**Communications in Business.....	COMM	216^	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Modern Language .....			3	(3,0)
**Applied Business Statistics .....	BADM	206	3	(3,0)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)
<b>JUNIOR YEAR</b>				
Biology, Chemistry or Physics.....			4	(3,2)
**Marketing Principles.....	BADM	309	3	(3,0)
**English, American, or World Literature.....	ENGL****		3	(3,0)
**Business Finance.....	BADM	321	3	(3,0)
Management and Organizational Behavior .....	BADM	338	3	(3,0)
+1st Year Advanced ROTC.....				
<b>SENIOR YEAR</b>				
**Strategic Management .....	BADM	422	3	(3,0)
**Social Science Core Course.....			3	(3,0)
Business Elective .....	BADM		3	(3,0)
Business Elective .....	BADM		3	(3,0)
**Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

\*\*\*\*ENGL 202, 215, 218, or 219

^ May take BADM 216 or COMM 216.

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**B.S. CHEMISTRY MAJOR****First Semester**

## FRESHMAN YEAR

Composition and Literature .....	ENGL	101	3	(3,0)*
General Chemistry I for Chemistry Majors ...	CHEM	153	3	(3,0)
General Chemistry Laboratory I for .....	CHEM	163	1	(0,3)
Chemistry Majors				
Analytic Geometry and Calculus I.....	MATH	131	4	(4,0)
A Modern Language .....			3	(3,0)
+1st Year Basic ROTC.....				
First Year Seminar.....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)

## SOPHOMORE YEAR

Major British Writers .....	ENGL	201	3	(3,0)
Organic Chemistry I.....	CHEM	207	3	(3,0)
Organic Chemistry I Laboratory.....	CHEM	217	1	(0,3)
Physics with Calculus I.....	PHYS	221	3	(3,0)
Physics with Calculus I Laboratory.....	PHYS	271	1	(0,2)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

## JUNIOR YEAR

Quantitative Analysis.....	CHEM	300	4	(3,3)
Physical Chemistry I.....	CHEM	305	3	(3,0)
Physical Chemistry I Lab.....	CHEM	315	1	(0,3)
History of Western or World Civilization .....	HIST		3	(3,0)
Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

## SENIOR YEAR

Inorganic Chemistry I.....	CHEM	401	3	(3,0)
Biochemistry .....	CHEM	409	3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
Senior Research .....	CHEM	419	3	
**Approved Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*Approved Electives—BIOL 290, 308, 421, 424, 427; CHEM 402, 404, 410; CSCI 205; MATH 303, 335, 343, 344, 381, 403, 411, 422, 470; PHYS 301, 307, 308, 315, 320, 403, 405, 409, 410.

Note: Some of the courses have prerequisites not listed in the minimum requirements for the BS Chemistry program.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**B.S. CHEMISTRY MAJOR****Second Semester**

## FRESHMAN YEAR

Composition and Literature .....	ENGL	102	3	(3,0)
General Chemistry II for Chemistry Majors..	CHEM	154	3	(3,0)
General Chemistry II Laboratory for .....	CHEM	164	1	(0,3)
Chemistry Majors				
Analytic Geometry and Calculus II .....	MATH	132	4	(4,0)
A Modern Language .....			3	(3,0)
+1st Year Basic ROTC.....				
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)

## SOPHOMORE YEAR

English, American, or World Literature.....	ENGL***		3	(3,0)
Physics with Calculus II.....	PHYS	222	3	(3,0)
Physics with Calculus II Laboratory.....	PHYS	272	1	(0,2)
Organic Chemistry II .....	CHEM	208	3	(3,0)
Organic Chemistry II Laboratory.....	CHEM	218	1	(0,3)
A Modern Language .....			3	(3,0)
Social Science Core Course.....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

## JUNIOR YEAR

Instrumental Methods .....	CHEM	302	4	(2,4)
Physical Chemistry II.....	CHEM	306	3	(3,0)
Physical Chemistry II Laboratory.....	CHEM	316	1	(0,3)
Introduction to Chemical Research.....	CHEM	308	2	(2,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				

## SENIOR YEAR

Elective .....			3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
**Approved Chemistry Elective.....	CHEM		3	(3,0)
Senior Research Project.....	CHEM	420	3	
+2nd Year Advanced ROTC .....				

\*\*Approved Chemistry Electives—CHEM 402, 404, 410

\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 124 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**B.S. CHEMISTRY MAJOR**  
**Biochemistry Specialty**  
**First Semester**

FRESHMAN YEAR				
General Chemistry I for Chemistry Majors ...	CHEM	153	3	(3,0)*
General Chemistry I Laboratory for ..... Chemistry Majors	CHEM	163	1	(0,3)
Analytic Geometry and Calculus I.....	MATH	131	4	(4,0)
Introduction to Biology I.....	BIOL	130	3	(3,0)
Introduction to Biology I Laboratory.....	BIOL	131	1	(0,3)
+1st Year Basic ROTC.....				
First Year Seminar.....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)
SOPHOMORE YEAR				
Composition and Literature .....	ENGL	101	3	(3,0)
Organic Chemistry I.....	CHEM	207	3	(3,0)
Organic Chemistry I Laboratory.....	CHEM	217	1	(0,3)
History of Western or World Civilization .....	HIST		3	(3,0)
Physics with Calculus I.....	PHYS	221	3	(3,0)
Physics with Calculus I Laboratory .....	PHYS	271	1	(0,2)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)
JUNIOR YEAR				
Major British Writers .....	ENGL	201	3	(3,0)
Quantitative Analysis .....	CHEM	300	4	(3,3)
Biochemistry I.....	CHEM	409	3	(3,0)
Biochemistry Laboratory .....	CHEM	460	1	(0,3)
A Modern Language .....			3	(3,0)
Social Science Core Course.....			3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)
SENIOR YEAR				
Elective .....			3	(3,0)
Inorganic Chemistry I.....	CHEM	401	3	(3,0)
Physical Chemistry I.....	CHEM	305	3	(3,0)
Elective .....			3	(3,0)
Senior Research I.....	CHEM	419	3	
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**B.S. CHEMISTRY MAJOR**  
**Biochemistry Specialty**  
**Second Semester**

FRESHMAN YEAR				
General Chemistry II for Chemistry Majors..	CHEM	154	3	(3,0)
General Chemistry II Laboratory for ..... Chemistry Majors	CHEM	164	1	(0,3)
Analytic Geometry and Calculus II .....	MATH	132	4	(4,0)
Introduction to Biology II.....	BIOL	140	3	(3,0)
Introduction to Biology II Laboratory .....	BIOL	141	1	(0,3)
+1st Year Basic ROTC.....				
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)
SOPHOMORE YEAR				
Composition and Literature .....	ENGL	102	3	(3,0)
Physics with Calculus II.....	PHYS	222	3	(3,0)
Physics with Calculus II Laboratory.....	PHYS	272	1	(0,2)
Organic Chemistry II .....	CHEM	208	3	(3,0)
Organic Chemistry II Laboratory.....	CHEM	218	1	(0,3)
History of Western or World Civilization .....	HIST		3	(3,0)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
JUNIOR YEAR				
English, American, or World Literature.....	ENGL***		3	(3,0)
Instrumental Methods .....	CHEM	302	4	(2,4)
Introduction to Chemical Research.....	CHEM	308	2	(2,0)
Biochemistry II .....	CHEM	410	3	(3,0)
A Modern Language .....			3	(3,0)
Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				
SENIOR YEAR				
Physical Chemistry II.....	CHEM	306	3	(3,0)
Physical Chemistry II Laboratory.....	CHEM	316	1	(0,3)
**Approved Biology Elective.....	BIOL		4	(3,3)
Senior Research II.....	CHEM	420	3	
+2nd Year Advanced ROTC .....				

\*\*Approved Biology electives: BIOL 290, 308, 421, 424, 427

\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 121 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**B.A. CHEMISTRY MAJOR****First Semester**

FRESHMAN YEAR				
Composition and Literature .....	ENGL	101	3	(3,0)*
General Chemistry I for Chemistry Majors .....	CHEM	153	3	(3,0)
General Chemistry I Laboratory for .....	CHEM	163	1	(0,3)
Chemistry Majors				
Applied Calculus I .....	MATH	106**	3	(3,0)
A Modern Language .....			3	(3,0)
+1st Year Basic ROTC .....				
First Year Seminar .....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)

**SOPHOMORE YEAR**

Major British Writers .....	ENGL	201	3	(3,0)
Organic Chemistry I .....	CHEM	207	3	(3,0)
Organic Chemistry I Laboratory .....	CHEM	217	1	(0,3)
College Physics I .....	PHYS	203	3	(3,0)
College Physics I Laboratory .....	PHYS	253	1	(0,2)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC .....				
Sophomore Seminar .....	LDRS	201/	1	(1,0)
(211 may be taken either semester) .....	LDRS	211	0	(0,1)

**JUNIOR YEAR**

***Required Advanced Course with lab .....		4	(3,3)	or 3	(3,0)
Elective .....			3		(3,0)
History of Western or World Civilization .....	HIST		3		(3,0)
Elective .....			3		(3,0)
Elective .....			3		(3,0)
+1st Year Advanced ROTC .....					
Junior Ethics Enrichment Experience .....	LDRS	311	0		(1,0)

**SENIOR YEAR**

Inorganic Chemistry I .....	CHEM	401	3		(3,0)
Senior Research I .....	CHEM	419	3		(2,0)
Biochemistry I .....	CHEM	409	3		(3,0)
Elective .....			3		(3,0)
Elective .....			3		(3,0)
+2nd Year Advanced ROTC .....					
Senior Leadership Integration Seminar .....	LDRS	411	0		(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

\*\*\*Required Advanced Courses: One course must be taken from each of the following areas: CHEM 300 or 302; CHEM 305/315 or 306/316. The second course of the sequence may be taken as an approved elective or general elective.

\*\*\*\*Approved Electives: CHEM 300, 302, 305, 306, 402, or 410.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**B.A. CHEMISTRY MAJOR****Second Semester**

FRESHMAN YEAR				
Composition and Literature .....	ENGL	102	3	(3,0)*
General Chemistry II for Chemistry Majors ....	CHEM	154	3	(3,0)
General Chemistry II Laboratory for .....	CHEM	164	1	(0,3)
Chemistry Majors				
Applied Calculus II .....	MATH	107**	3	(3,0)
A Modern Language .....			3	(3,0)
+1st Year Basic ROTC .....				
Freshman Ethical Fitness Seminar .....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)

**SOPHOMORE YEAR**

English, American, or World Literature .....	ENGL*****		3		(3,0)
Organic Chemistry II .....	CHEM	208	3		(3,0)
Organic Chemistry II Laboratory .....	CHEM	218	1		(0,3)
College Physics II .....	PHYS	204	3		(3,0)
College Physics II Laboratory .....	PHYS	254	1		(0,2)
A Modern Language .....			3		(3,0)
Social Science Core Course .....			3		(3,0)
Required Physical Education .....	RPED		0		(0,1)
+2nd Year Basic ROTC .....					

**JUNIOR YEAR**

***Required Advanced Course with lab .....		4	(2,4)	or 3	(3,0)
Introduction to Chemical Research .....	CHEM	308	2		(2,0)
History of Western or World Civilization .....	HIST		3		(3,0)
Elective .....			3		(3,0)
Elective .....			3		(3,0)
+1st Year Advanced ROTC .....					

**SENIOR YEAR**

Senior Research II .....	CHEM	420	3		(3,0)
Elective .....			3		(3,0)
****Required Approved Elective .....	CHEM		3		(3,0)
Elective .....			3		(3,0)
Elective .....			3		(3,0)
+2nd Year Advanced ROTC .....					

\*\*\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 118-120 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.



**B.A. CHEMISTRY MAJOR****Teaching Specialization in Chemistry & Comprehensive Broad Field Science  
First Semester**

## FRESHMAN YEAR

Composition and Literature .....	ENGL	101	3	(3,0)*
General Chemistry I for Chemistry Majors .....	CHEM	153	3	(3,0)
General Chemistry I Laboratory for .....	CHEM	163	1	(0,3)
Chemistry Majors				
Applied Calculus I .....	MATH	106**	3	(3,0)
Education in Modern Society.....	EDUC	101	3	(3,0)
First Year Seminar.....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)
+1st Year Basic ROTC.....				

## SOPHOMORE YEAR

Major British Writers .....	ENGL	201	3	(3,0)
Organic Chemistry I.....	CHEM	207	3	(3,0)
Organic Chemistry I Laboratory.....	CHEM	217	1	(0,3)
College Physics I.....	PHYS	203	3	(3,0)
College Physics I Laboratory.....	PHYS	253	1	(0,2)
History of Western or World Civilization .....	HIST		3	(3,0)
Adolescent Development .....	EDUC	206	3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

## JUNIOR YEAR

Quantitative Analysis .....	CHEM	300	4	(3,3)
Biochemistry I.....	CHEM	409	3	(3,0)
Introduction to Biology I or .....	BIOL	130 or	3	(3,0)
General Biology I.....	BIOL	101	3	(3,0)
Introduction to Biology I Laboratory or .....	BIOL	131 or	1	(0,3)
General Biology I Laboratory.....	BIOL	111	1	(0,3)
Learners with Exceptionalities.....	EDUC	312	3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

## SENIOR YEAR

Inorganic Chemistry I .....	CHEM	401	3	(3,0)
Senior Research I .....	CHEM	419	3	(3,0)
Methods & Applications of Science .....	CHEM	330	3	(2,3)
Teaching Reading in Middle & High School....	EDUC	306	3	(3,0)
General Elective.....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

\*\*\*Chemistry elective chosen from CHEM 208/218, 302, 305/315, 402 or 410.

ROTC hours (credit, lectures, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**B.A. CHEMISTRY MAJOR****Teaching Specialization in Chemistry & Comprehensive Broad Field Science  
Second Semester**

## FRESHMAN YEAR

Composition and Literature .....	ENGL	102	3	(3,0)*
General Chemistry II for Chemistry Majors..	CHEM	154	3	(3,0)
General Chemistry II Laboratory for .....	CHEM	164	1	(0,3)
Chemistry Majors				
Applied Calculus II .....	MATH	107**	3	(3,0)
General Psychology .....	PSYC	201	3	(3,0)
Educational Psychology.....	EDUC	202	3	(3,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)
+1st Year Basic ROTC				

## SOPHOMORE YEAR

World Literature .....	ENGL		3	(3,0)
College Physics II .....	PHYS	204	3	(3,0)
College Physics II Laboratory .....	PHYS	254	1	(0,2)
History of Western or World Civilization .....	HIST		3	(3,0)
Foundations in Reading .....	EDUC	301	3	(3,0)
Introduction to Earth Science.....	EART	201	4	(3,3)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

## JUNIOR YEAR

Physical Chemistry II.....	CHEM	306	3	(3,0)
Physical Chemistry II Laboratory.....	CHEM	316	1	(0,3)
Introduction to Biology II or.....	BIOL	140 or	3	(3,0)
General Biology II .....	BIOL	102	3	(3,0)
Introduction to Biology II Laboratory or.....	BIOL	141 or	1	(0,3)
General Biology II Laboratory.....	BIOL	112	1	(0,3)
Introduction to Chemical Research.....	CHEM	308	2	(2,0)
Methods & Materials-Middle & High School..	EDUC	401	3	(3,0)
***Chemistry Elective.....	CHEM		3 or 4	(3,0)
+1st Year Advanced ROTC.....				

## SENIOR YEAR

Senior Research II.....	CHEM	420	3	(3,0)
Special Methods in Teaching .....	EDUC	402	3	(3,0)
Internship in Teaching.....	EDUC	499	12	

**SEE NOTE AT BOTTOM OF PAGE 189.**

HOURS REQUIRED FOR GRADUATION: 124-125 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**CIVIL ENGINEERING MAJOR**  
**First Semester**

FRESHMAN YEAR				
Composition and Literature .....	ENGL	101	3	(3,0)*
General Biology for Engineers .....	BIOL	150	3	(3,0)
General Biology for Engineers Laboratory....	BIOL	151	1	(0,2)
Analytic Geometry and Calculus I.....	MATH	131	4	(4,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Introduction to Civil Engineering .....	CIVL	103	1	(0,2)
First Year Seminar.....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)
+1st Year Basic ROTC .....				
SOPHOMORE YEAR				
**Approved English .....	ENGL		3	(3,0)
General Chemistry I.....	CHEM	151	3	(3,0)
General Chemistry I Laboratory.....	CHEM	161	1	(0,2)
Analytic Geometry and Calculus III.....	MATH	231	4	(4,0)
Surveying .....	CIVL	205	3	(3,0)
Surveying Laboratory .....	CIVL	235	1	(0,2)
Computer Application for Civil and Environmental Engineers.....	CIVL	210	3	(3,0)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)
JUNIOR YEAR				
Dynamics .....	CIVL	203	3	(3,0)
Mechanics of Materials.....	CIVL	304	3	(3,0)
Transportation Engineering.....	CIVL	305	3	(3,0)
Materials Laboratory.....	CIVL	307	1	(0,2)
Engineering Economy.....	CIVL	314	2	(2,0)
Fluid Mechanics.....	CIVL	320	3	(3,0)
Measurements, Analysis, and Modeling for CEE Systems.....	CIVL	330	3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)
SENIOR YEAR				
Reinforced Concrete Design .....	CIVL	404	3	(3,0)
Water and Wastewater Systems .....	CIVL	408	3	(3,0)
Introduction to Geotechnical Engineering .....	CIVL	409	3	(3,0)
Fluid Mechanics Laboratory .....	CIVL	418	1	(0,2)
Social Science Core Course .....			3	(3,0)
Civil Engineering Capstone I.....	CIVL	432	3	(3,1)
Engineering Practice and Professional Licensure.....	CIVL	412	1	(0,1)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

+ROTC hours (credits, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*A student must complete COMM 260 (second semester sophomore year) and one of ENGL 201, 202, 215, 218, or 219.

\*\*\*To be selected from an approved list of courses in the humanities or social sciences.

**CIVIL ENGINEERING MAJOR**  
**Second Semester**

FRESHMAN YEAR				
Composition and Literature .....	ENGL	102	3	(3,0)
Physics with Calculus I.....	PHYS	221	3	(3,0)
Physics with Calculus I Laboratory .....	PHYS	271	1	(0,2)
Analytic Geometry and Calculus II .....	MATH	132	4	(4,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Engineering Drawing.....	CIVL	101	2	(0,4)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)
+1st Year Basic ROTC .....				
SOPHOMORE YEAR				
Technical Writing and Communication .....	COMM	260	3	(3,0)
General Chemistry II.....	CHEM	152	3	(3,0)
General Chemistry II Laboratory.....	CHEM	162	1	(0,2)
Applied Mathematics I.....	MATH	234	4	(4,0)
Statics.....	CIVL	202	3	(3,0)
Geospatial Representation .....	CIVL	208	3	(3,0)
Geomatics Laboratory.....	CIVL	239	1	(0,2)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
JUNIOR YEAR				
Highway Engineering .....	CIVL	302	3	(3,0)
Asphalt and Concrete Laboratory .....	CIVL	327	1	(0,2)
Structural Analysis .....	CIVL	309	4	(4,0)
Hydrology and Hydraulics.....	CIVL	321	3	(3,0)
Introduction to Environmental Engineering .....	CIVL	322	3	(3,0)
Engineering Management.....	CIVL	411	3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+1st Year Advanced ROTC.....				
SENIOR YEAR				
Geotechnical Laboratory.....	CIVL	402	1	(0,2)
Geotechnical Engineering II .....	CIVL	410	3	(3,0)
Steel Design .....	CIVL	406	3	(3,0)
Environmental Engineering Laboratory .....	CIVL	419	1	(0,2)
Civil Engineering Capstone II .....	CIVL	433	3	(3,1)
***Humanities/Social Science.....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 135 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**CONSTRUCTION ENGINEERING MAJOR****First Semester**

<b>FRESHMAN YEAR</b>				
Composition and Literature .....	ENGL	101	3	(3,0)*
General Biology for Engineers .....	BIOL	150	3	(3,0)
General Biology for Engineers Laboratory....	BIOL	151	1	(0,2)
Precalculus .....	MATH	119	4	(4,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Introduction to Civil Engineering .....	CIVL	103	1	(0,2)
First Year Seminar.....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)
+1st Year Basic ROTC.....				
<b>SOPHOMORE YEAR</b>				
Principles of Microeconomics .....	BADM	202	3	(3,0)
General Chemistry I.....	CHEM	151	3	(3,0)
General Chemistry I Laboratory.....	CHEM	161	1	(0,2)
Analytic Geometry and Calculus II .....	MATH	132	4	(4,0)
Surveying .....	CIVL	205	3	(3,0)
Surveying Laboratory .....	CIVL	235	1	(0,2)
Computer Application for Civil and Environmental Engineers.....	CIVL	210	3	(3,0)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)
<b>JUNIOR YEAR</b>				
Mechanics of Materials.....	CIVL	304	3	(3,0)
Engr/Com. Law/Ethics/Safety/Contracts.....	CONE	302	4	(4,0)
Resource Estimating .....	CONE	311	3	(3,0)
Engr Materials & Methods.....	CONE	320	3	(3,0)
Quality Management/Labor Relations.....	CONE	330	3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)
<b>SENIOR YEAR</b>				
**Approved English .....	ENGL		3	(3,0)
Engineering Practice and Professional Licensure.	CIVL	412	1	(1,0)
Project Scheduling .....	CONE	410	3	(3,0)
Project Management and Engr Admin.....	CONE	415	3	(3,0)
Mechanical/Electrical Systems .....	CONE	460	3	(3,0)
Senior Design I .....	CONE	481	2	(2,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

+ROTC hours (credits, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*A student must complete COMM 260 (second semester sophomore year) and one of ENGL 201, 202, 215, 218, or 219.

\*\*\*To be selected from an approved list of courses in the humanities or social sciences.

**CONSTRUCTION ENGINEERING MAJOR****Second Semester**

<b>FRESHMAN YEAR</b>				
Composition and Literature .....	ENGL	102	3	(3,0)
Physics with Calculus I.....	PHYS	221	3	(3,0)
Physics with Calculus I Laboratory .....	PHYS	271	1	(0,2)
Analytic Geometry and Calculus I.....	MATH	131	4	(4,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Engineering Drawing.....	CIVL	101	2	(0,4)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)
+1st Year Basic ROTC.....				
<b>SOPHOMORE YEAR</b>				
Technical Writing and Communication .....	COMM	260	3	(3,0)
General Chemistry II.....	CHEM	152	3	(3,0)
General Chemistry II Laboratory.....	CHEM	162	1	(0,2)
Business Statistics I.....	BADM	205	3	(3,0)
Statics.....	CIVL	202	3	(3,0)
Geospatial Representation .....	CIVL	208	3	(3,0)
Geomatics Laboratory.....	CIVL	239	1	(0,2)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
<b>JUNIOR YEAR</b>				
Engineering Economy.....	CIVL	314	2	(2,0)
Intro. to Financial Acct. and Reporting .....	BADM	211	3	(3,0)
Advanced Estimating.....	CONE	312	3	(3,0)
Structural Analysis and Design.....	CONE	340	3	(3,0)
Commercial Const./Engr. Equip .....	CONE	350	3	(3,0)
Soils and Foundations.....	CONE	360	3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+1st Year Advanced ROTC.....				
<b>SENIOR YEAR</b>				
Constr. Methods & Temp Str. Design .....	CONE	440	3	(3,0)
Facilities Op. and Maintenance.....	CONE	450	3	(3,0)
Prod. Processes/Rapid Development .....	CONE	470	3	(3,0)
Senior Design II .....	CONE	482	3	(3,0)
***Social Science Core Course.....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 135 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**COMPUTER SCIENCE MAJOR****First Semester**

## FRESHMAN YEAR

Composition and Literature .....	ENGL	101	3	(3,0)*
Introduction to Computer Science I.....	CSCI	201	4	(3,2)
A Modern Language .....			3	(3,0)
Analytic Geometry and Calculus I.....	MATH	131	4	(4,0)
Required Physical Education .....	RPED	250	2	(2,0)
+1st Year Basic ROTC.....				
First Year Seminar.....	LDRS	101	1	(2,0)

## SOPHOMORE YEAR

**English .....	ENGL		3	(3,0)
Computer Organization & Programming.....	CSCI	305	3	(3,0)
A Modern Language .....			3	(3,0)
++Biology, Chemistry or Physics .....			4	(3,2)
Introduction to Discrete Structures .....	MATH	206	3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

## JUNIOR YEAR

Programming Languages .....	CSCI	355	3	(3,0)
++Biology, Chemistry or Physics .....			4	(3,2)
+++Approved Computer Science Elective .....	CSCI		3	
Elective .....			3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

## SENIOR YEAR

Operating Systems .....	CSCI	405	3	(3,0)
Software Engineering.....	CSCI	420	3	(3,0)
Senior Seminar in Computer Science .....	CSCI	495	3	(3,0)
Digital Logic and Circuits.....	ELEC	311	3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*A student must complete COMM 260 and one of ENGL 201, 202, 215, 218, or 219.

+ROTC hours (credit, lecture and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.  
++Science must be CHEM 151 (161)/CHEM 152 (162) or BIOL 101 (111)/BIOL 102 (112) or PHYS 221 (271)/222 (272).

+++Any computer science course numbered at 300 or 400 level.

**COMPUTER SCIENCE MAJOR****Second Semester**

## FRESHMAN YEAR

Composition and Literature .....	ENGL	102	3	(3,0)
A Modern Language .....			3	(3,0)
Introduction to Computer Science II.....	CSCI	202	3	(3,2)
Analytic Geometry and Calculus II .....	MATH	132	4	(4,0)
Social Science Core Course.....			3	(3,0)
Required Physical Education .....	RPED	251	2	(2,0)
+1st Year Basic ROTC.....				
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)

## SOPHOMORE YEAR

**English .....	ENGL		3	(3,0)
++Biology, Chemistry or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
Data Structures and Algorithms.....	CSCI	223	3	(3,0)
Introduction to Probability and Statistics.....	STAT	261	3	(3,0)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)

## JUNIOR YEAR

Computer Networks and Internets .....	CSCI	317	3	(3,0)
Database Design.....	CSCI	320	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
++Biology, Chemistry or Physics .....			4	(3,2)
Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				

## SENIOR YEAR

Software Engineering Practicum .....	CSCI	421	3	(3,0)
OR				
Senior Research Project .....	CSCI	499	3	(3,0)
*Digital Systems Engineering.....	ELEC	330	3	(3,0)
+++Approved Computer Science Elective .....	CSCI		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

\*ELEC 418 may be substituted for ELEC 330 by students who made a grade of "B" or higher in both CSCI 305 and ELEC 311.

HOURS REQUIRED FOR GRADUATION: 128 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**CRIMINAL JUSTICE MAJOR****First Semester**

## FRESHMAN YEAR

Composition and Literature .....	ENGL	101	3	(3,0)*
History of Western or World Civilization .....	HIST		3	(3,0)
A Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Required Physical Education .....	RPED	250	2	(2,0)
+1st Year Basic ROTC .....				
First Year Seminar.....	LDRS	101	1	(2,0)

## SOPHOMORE YEAR

Introduction to Criminal Justice.....	CRMJ	201	3	(3,0)
Major British Writers .....	ENGL	201	3	(3,0)
Elementary Mathematical Modeling.....	MATH	104**	3	(3,0)
American National Government.....	PSCI	102	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

## JUNIOR YEAR

Police Systems and Practices .....	CRMJ	370	3	(3,0)
Cluster A Elective .....			3	(3,0)
Cluster A Elective .....			3	(3,0)
U.S. History Elective .....	HIST		3	(3,0)
General Elective.....			3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

## SENIOR YEAR

Cluster A Elective .....			3	(3,0)
Cluster A Elective .....			3	(3,0)
Cluster B Elective .....			3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

+ROTC hours (credit, lecture and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**CRIMINAL JUSTICE MAJOR****Second Semester**

## FRESHMAN YEAR

Composition and Literature .....	ENGL	102	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
A Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Required Physical Education .....	RPED	251	2	(2,0)
+1st Year Basic ROTC.....				
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)

## SOPHOMORE YEAR

Criminology .....	CRMJ	202	3	(3,0)
English, American or World Literature.....	ENGL***		3	(3,0)
Finite Mathematics.....	MATH	105**	3	(3,0)
U.S. History elective .....	HIST		3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

## JUNIOR YEAR

Corrections.....	CRMJ	380	3	(3,0)
Cluster A Elective .....			3	(3,0)
Cluster A Elective .....			3	(3,0)
Cluster B Elective .....			3	(3,0)
General Elective.....			3	(3,0)
+1st Year Advanced ROTC.....				

## SENIOR YEAR

Cluster A Elective .....			3	(3,0)
Cluster A Elective .....			3	(3,0)
Cluster B Elective .....			3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
+2nd Year Advanced ROTC .....				

\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**EDUCATION****SOCIAL STUDIES PRE-EDUCATION****First Semester****FRESHMAN YEAR**

Composition and Literature .....	ENGL	101	3	(3,0)*
Elementary Mathematical Modeling.....	MATH	104***	3	(3,0)
General Biology I.....	BIOL	101	3	(3,0)
General Biology I Laboratory.....	BIOL	111	1	(0,2)
Education in Modern Society.....	EDUC	101	3	(3,0)
+1st Year Basic ROTC.....				
Required Physical Education .....	RPED	250	2	(2,0)
First Year Seminar.....	LDRS	101	1	(2,0)

**SOPHOMORE YEAR**

Major British Writers .....	ENGL	201	3	(3,0)
Chemistry or Physics .....			3	(3,0)
Chemistry or Physics Lab .....			1	(0,2)
Social Science Core Course.....	PSCI	102	3	(3,0)
History of World Civilization I.....	HIST	105	3	(3,0)
Adolescent Development.....	EDUC	206	3	(3,0)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

**Teaching Specializations are available in Biology, Chemistry,  
Modern Languages, and Physical Education**

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**EDUCATION****SOCIAL STUDIES PRE-EDUCATION****Second Semester****FRESHMAN YEAR**

Composition and Literature .....	ENGL	102	3	(3,0)
Finite Mathematics.....	MATH	105***	3	(3,0)
General Biology II .....	BIOL	102	3	(3,0)
General Biology II Laboratory.....	BIOL	112	1	(0,2)
Educational Psychology.....	EDUC	202	3	(3,0)
General Psychology .....	PSYC	201	3	(3,0)
+1st Year Basic ROTC.....				
Required Physical Education .....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)

**SOPHOMORE YEAR**

Masterpieces of World Literature I or II .....	ENGL		3	(3,0)
Chemistry or Physics .....			4	(3,2)
Chemistry or Physics Lab .....			1	(0,2)
History of World Civilization II.....	HIST	106	3	(3,0)
Art Appreciation.....	FNAR	206	3	(3,0)
Foundations in Reading .....	EDUC	301	3	(3,0)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)

**Teaching Specializations are available in Biology, Chemistry,  
Modern Languages, and Physical Education**

NOTE: Students in Pre-Education are eligible to transfer into the Education Major upon meeting the requirements for admission to Senior Level Study as follows:

- 1) Submitted official passing scores on all three parts of PRAXIS core exams to The Citadel as well as the South Carolina Department of Education.
- 2) Maintained a cumulative GPA of 2.750 or higher;
- 3) Passed both EDUC 101 and EDUC 202 with a grade of "C" or better.

Students who are not qualified to move into Education major senior level study will not be permitted to enroll in EDUC 306, EDUC 402 or EDUC 499.

**SOCIAL STUDIES EDUCATION MAJOR****First Semester****JUNIOR YEAR**

Learners with Exceptionalities.....	EDUC	312	3	(3,0)*
Introduction to Sociology .....	SOCI	201	3	(3,0)
Survey of American History .....	HIST	201	3	(3,0)
World Geography .....	GEOG	209	3	(3,0)
Music Appreciation .....	FNAR	205	3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Teaching Reading in the Secondary School...	EDUC	306	3	(3,0)
Social and Cultural History of the Non-Western World .....	HIST	206	3	(3,0)
***Urban Politics.....	PSCI	302	3	(3,0)
Principles of Macroeconomics.....	BADM	201	3	(3,0)
**Approved Social Studies Elective.....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*Selected from anthropology, geography, political science, economics, psychology, or history.

\*\*\*Or PSCI 306 - Legislative Processes

Or PSCI 307 - Southern Politics

Or PSCI 401 - Political Issues and Public Policy

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**SOCIAL STUDIES EDUCATION MAJOR****Second Semester****JUNIOR YEAR**

Methods and Materials of Middle & High School Teaching .....	EDUC	401	3	(3,0)
Survey of American History .....	HIST	202	3	(3,0)
Cultural Anthropology .....	ANTH	202	3	(3,0)
History Elective .....	HIST		3	(3,0)
**Approved Social Studies Elective.....			3	(3,0)
+1st Year Advanced ROTC				

**SENIOR YEAR**

*Internship in Teaching.....	EDUC	499	12	
Special Methods in Teaching .....	EDUC	402	3	(3,0)

NOTE: Education majors must make a formal application for admission to the Internship in Teaching (EDUC 499) no later than the end of the fall semester of their sophomore year. To be eligible for the internship, students must have

- 1) completed all professional education and content coursework;
- 2) on file at The Citadel South Carolina State Department of Education clearance through the FBI and SLED;
- 3) a cumulative GPA of at least 2.750;
- 5) completed successfully all previous field experiences;
- 6) on file at The Citadel official records of the appropriate PRAXIS II test score(s) and the appropriate Principles of Learning and Teaching (PLT) test score. It is strongly recommended that students take the PLT as soon as they have completed EDUC 101, EDUC 202 and EDUC 312.

\*For non-contract students, ROTC credit is included in the internship hours due to high impact practices.

HOURS REQUIRED FOR GRADUATION: 123 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**ELECTRICAL ENGINEERING MAJOR****First Semester**

## FRESHMAN YEAR

Composition and Literature .....	ENGL	101	3	(3,0)*
Analytic Geometry and Calculus I.....	MATH	131	4	(4,0)
History of Western Civilization .....	HIST	103	3	(3,0)
Fundamentals of Electrical Engineering.....	ELEC	106	3	(3,0)
+1st Year Basic ROTC.....				
Required Physical Education .....	RPED	250	2	(2,0)
First Year Seminar.....	LDRS	101	1	(2,0)

## SOPHOMORE YEAR

****Approved English .....	ENGL		3	(3,0)
Analytic Geometry and Calculus III.....	MATH	231	4	(4,0)
Physics with Calculus I.....	PHYS	221	3	(3,0)
Physics with Calculus I Laboratory .....	PHYS	271	1	(0,2)
Electric Circuit Analysis I.....	ELEC	201	3	(3,0)
Digital Logic and Circuit .....	ELEC	311	3	(3,0)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

## JUNIOR YEAR

++Approved Science.....			3	(3,0)
+++Approved Science Laboratory.....			1	(0,2)
Applied Mathematics II .....	MATH	335	3	(3,0)
Signals and Systems.....	ELEC	309	3	(3,0)
Engineering Administration .....	CIVL	314	2	(2,0)
Electronics I .....	ELEC	306	3	(3,0)
Electronics Laboratory .....	ELEC	313	1	(0,2)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

## SENIOR YEAR

Design I.....	ELEC	421	3	(1,4)
**Non-Departmental Elective .....			3	(3,0)
Applied Probability and Statistics for Engineers.....	ELEC	412	3	(3,0)
***Approved Department Elective.....	ELEC	4XX	3	(3,0)
***Approved Department Elective.....	ELEC	4XX	3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit. Lecture, laboratory hours, in that order.

\*\*Advanced humanities or social science course.

\*\*\*APPROVED DEPARTMENT ELECTIVES must be selected from among the following courses: ELEC 307, ELEC 401, ELEC 403, ELEC 405, ELEC 407, ELEC 413, ELEC 414, ELEC 416, ELEC 418, ELEC 419, ELEC 423, ELEC 424, ELEC 425, ELEC 426, ELEC 427, ELEC 428, ELEC 430, ELEC 450, and CSCI 420.

\*\*\*\*A student must complete COMM 260 and one of ENGL 201, 202, 215, 218, or 219.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

++CHEM 151, BIOL 101, or BIOL 150

+++CHEM 161, BIOL 111, or BIOL 151

**ELECTRICAL ENGINEERING MAJOR****Second Semester**

## FRESHMAN YEAR

Computer Applications for .....	ELEC	206	3	(3,0)
Electrical Engineers				
Analytic Geometry and Calculus II .....	MATH	132	4	(4,0)
Composition and Literature .....	ENGL	102	3	(3,0)
History of Western Civilization .....	HIST	104	3	(3,0)
Social Science Core Course.....			3	(3,0)
+1st Year Basic ROTC.....				
Required Physical Education .....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)

## SOPHOMORE YEAR

****Approved English .....	ENGL		3	(3,0)
Applied Mathematics I.....	MATH	234	4	(4,0)
Physics with Calculus II.....	PHYS	222	3	(3,0)
Physics with Calculus II Laboratory.....	PHYS	272	1	(0,2)
Electric Circuit Analysis II.....	ELEC	202	3	(3,0)
Electrical Laboratory .....	ELEC	204	1	(0,2)
Digital Systems Engineering.....	ELEC	330	3	(3,0)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)

## JUNIOR YEAR

Systems I.....	ELEC	312	3	(3,0)
Electromechanical Energy Conversion.....	ELEC	316	3	(3,0)
Electrical Machinery Laboratory .....	ELEC	302	1	(0,2)
+++Approved Science .....			3	(3,0)
++++Approved Science Laboratory .....			1	(0,2)
++Technical Elective .....			3	(3,0)
Electromagnetic Fields.....	ELEC	318	3	(3,0)
+1st Year Advanced ROTC.....				

## SENIOR YEAR

Design II.....	ELEC	422	3	(1,4)
***Approved Department Elective.....	ELEC	4XX	3	(3,0)
***Approved Department Elective.....	ELEC	4XX	3	(3,0)
***Approved Department Elective.....	ELEC	4XX	3	(3,0)
+2nd Year Advanced ROTC .....				

++Technical Electives: *Optics* (PHYS 308), *Thermodynamics* (PHYS 410), *Statics and Mechanics of Materials For Non-Civil Engineers*, (CIVL 310); *Data Structures*, (CSCI 223); *Statics* (CIVL 202), *Applied Numerical Methods I* (MATH 343), *Applied Numerical Methods II* (MATH 344), *Advanced Topics in Mathematics* (MATH 490), *Deterministic Methods of Operational Research*, (MATH 381), *Mathematical Models and Applications*, (MATH 470), *Computer Applications w/ Lab*, (MECH 325), or other technical course approved by the department head.

+++CHEM 152, BIOL 102, or CHEM 140

++++CHEM 162, BIOL 112, or CHEM 141

Credit hours required for graduation: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.



**ENGLISH MAJOR****First Semester**

FRESHMAN YEAR				
Composition and Literature .....	ENGL	101	3	(3,0)*
Elementary Mathematical Modeling.....	MATH	104**	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
A Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
+1st Year Basic ROTC .....				
Required Physical Education .....	RPED	250	2	(2,0)
First Year Seminar.....	LDRS	101	1	(2,0)

**SOPHOMORE YEAR**

Major British Writers .....	ENGL	201	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Introduction to Philosophy, or.....	PHIL	201	3	(3,0)
Mythology, or.....	ENGL	211		
The Bible as Literature.....	ENGL	212		
Social Science Core .....			3	(3,0)
A Modern Language .....			3	(3,0)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

**JUNIOR YEAR**

Shakespeare I, or.....	ENGL	303	3	(3,0)
Shakespeare II.....	ENGL	304		
Legal Writing, or.....	ENGL	411	3	(3,0)
Advanced Composition.....	COMM	413		
Approved ENGL Elective (300 or 400 level)	ENGL		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Senior Seminar I, or.....	ENGL	402	3	(3,0)
Senior Seminar II.....	ENGL	403		
Approved ENGL Elective (300 or 400 level)	ENGL		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**ENGLISH MAJOR****Second Semester**

FRESHMAN YEAR				
Composition and Literature .....	ENGL	102	3	(3,0)
Finite Mathematics.....	MATH	105**	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
A Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
+1st Year Basic ROTC .....				
Required Physical Education .....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)

**SOPHOMORE YEAR**

English, American, or World Literature.....	ENGL***		3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Literary Theory .....	ENGL	216	3	(3,0)
A Modern Language .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)

**JUNIOR YEAR**

Internship in Professional Communication....	COMM	499	3	(3,0)
Approved ENGL Elective (300 or 400 level)	ENGL		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				

**SENIOR YEAR**

Approved Fine Arts Elective* .....			3	(3,0)
Approved ENGL Elective (300 or 400 level)	ENGL		3	(3,0)
Approved ENGL Elective (300 or 400 level)	ENGL		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

\*See pages 131-132 for a list of choices.

\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**HEALTH AND HUMAN PERFORMANCE****B.S. in Exercise Science****First Semester**

<b>FRESHMAN YEAR</b>				
Composition and Literature .....	ENGL	101	3	(3,0)*
History of Western or World Civilization .....	HIST		3	(3,0)
Introduction to Health and Human Performance .....	PHED	101	3	(3,0)
++General Biology I .....	BIOL	101	3	(3,0)
++General Biology I Laboratory .....	BIOL	111	1	(0,2)
Contemporary Health Foundations .....	RPED	250	2	(2,0)
First Year Seminar .....	LDRS	101	1	(2,0)
+1st Year Basic ROTC .....				

**SOPHOMORE YEAR**

Major British Writers .....	ENGL	201	3	(3,0)
Human Anatomy and Physiology I .....	BIOL	217	3	(3,0)
Human Anatomy and Physiology I Laboratory .....	BIOL	227	1	(0,2)
Elementary Mathematical Modeling .....	MATH	104***	3	(3,0)
First Aid and CPR .....	RPED	113	0	(0,1)
Elective .....			3	(3,0)
**Approved Elective .....			3	(3,0)
+2nd Year Basic ROTC .....				
Sophomore Seminar .....	LDRS	201/	1	(1,0)
(211 may be taken either semester) .....	LDRS	211	0	(0,1)

**JUNIOR YEAR**

Physical Science (Chemistry or Physics) .....			4	(3,2)
A Modern Language .....			3	(3,0)
Developmental Psychology .....	PSYC	202	3	(3,0)
Biomechanical Kinesiology .....	EXSC	314	3	(3,0)
Physiology of Exercise I .....	EXSC	319	3	(3,0)
Physiology of Exercise I Lab .....	EXSC	329	1	(0,2)
+1st Year Advanced ROTC .....				
Junior Ethics Enrichment Experience .....	LDRS	311	0	(1,0)

**SENIOR YEAR**

A Modern Language .....			3	(3,0)
First Aid and Emergency Care .....	HLED	400	3	(3,0)
Measurement and Evaluation .....	EXSC	305	3	(3,0)
Nutrition .....	HLED	401	3	(3,0)
**Approved Elective .....			3	(3,0)
**Approved Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*Approved Electives are determined by the degree selected, Exercise Science or Sport Management. A complete list of Approved Electives is available in the section of this catalog on Department of Health and Human Performance.

\*\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

++BIOL 130/131 or BIOL 140/141 may be taken.

**HEALTH AND HUMAN PERFORMANCE****B.S. in Exercise Science****Second Semester**

<b>FRESHMAN YEAR</b>				
Composition and Literature .....	ENGL	102	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Motor Development .....	EXSC	200	3	(3,0)
Social Science Core Course .....			3	(3,0)
Foundations of Fitness and Exercise .....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar .....	LDRS	111	0	(1,0)
+1st Year Basic ROTC .....				

**SOPHOMORE YEAR**

English, American, or World Literature .....	ENGL****		3	(3,0)
Human Anatomy and Physiology II .....	BIOL	218	3	(3,0)
Human Anatomy and Physiology II Laboratory .....	BIOL	228	1	(0,2)
Finite Mathematics .....	MATH	105***	3	(3,0)
Care and Prevention of Athletic Injuries .....	EXSC	202	3	(3,0)
Accommodating Persons with Disabilities within Sport and Physical Activity .....	PHED	203	3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC .....				

**JUNIOR YEAR**

Exercise Testing & Prescription .....	EXSC	403	3	(3,0)
Physical Science (Chemistry or Physics) .....			4	(3,2)
Informative Speaking .....	ENGL	205	3	(3,0)
A Modern Language .....			3	(3,0)
Drug and Substance Abuse .....	HLED	302	3	(3,0)
Physiology of Exercise II .....	EXSC	320	3	(3,0)
+1st Year Advanced ROTC .....				

**SENIOR YEAR**

Sport Nutrition .....	HLED	402	3	(3,0)
A Modern Language .....			3	(3,0)
Leadership in Health, Exercise, and Sport Science Organizations .....	PESM	404	3	(3,0)
**Approved Elective .....			3	(3,0)
Directed Field Experience .....	PHED	406	3	
Senior Seminar in Health, Exercise, Sport Science, and Physical Education .....	EXSC	421	1	(1,0)
+2nd Year Advanced ROTC .....				

\*\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 129 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**HEALTH AND HUMAN PERFORMANCE****B.S. in Sport Management****First Semester**

<b>FRESHMAN YEAR</b>				
Composition and Literature .....	ENGL	101	3	(3,0)*
History of Western or World Civilization .....	HIST		3	(3,0)
Introduction to Health, Exercise, Sport Science and Physical Education.....	PHED	101	3	(3,0)
Elementary Mathematical Modeling.....	MATH	104***	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Contemporary Health Foundations .....	RPED	250	2	(2,0)
First Year Seminar.....	LDRS	101	1	(2,0)
+1st Year Basic ROTC.....				

**SOPHOMORE YEAR**

Major British Writers .....	ENGL	201	3	(3,0)
A Modern Language .....			3	(3,0)
Introduction to Financial Accounting and Reporting.....	BADM	211	3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
Introduction to Sport Management .....	PESM	201	3	(3,0)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

**JUNIOR YEAR**

Biology, Chemistry, or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
Marketing Principles .....	BADM	309	3	(3,0)
Approved Elective .....			3	(3,0)
**Approved Elective .....			3	(3,0)
**Approved Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Event Management .....	PESM	405	3	(3,0)
Leadership in Health, Exercise, and Sport Science Organizations .....	PESM	404	3	(3,0)
Directed Field Experience.....	PHED	406	3	(3,0)
Approved Elective .....			3	(3,0)
**Approved Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*Approved Electives are determined by the degree selected, Exercise Science or Sport Management. A complete list of Approved Electives is available in the section of this catalog on Department of Health and Human Performance.

\*\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**HEALTH AND HUMAN PERFORMANCE****B.S. in Sport Management****Second Semester**

<b>FRESHMAN YEAR</b>				
Composition and Literature .....	ENGL	102	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Statistical Methods.....	STAT	160	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Microcomputer Applications .....	CSCI	110	3	(3,0)
Social Science Core Course .....			3	(3,0)
Foundations of Fitness and Exercise.....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
+1st Year Basic ROTC.....				

**SOPHOMORE YEAR**

English, American, or World Literature.....	ENGL****		3	(3,0)
Principles of Microeconomics .....	BADM	202	3	(3,0)
Social and Cultural Aspects of Sport .....	PESM	202	3	(3,0)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

**JUNIOR YEAR**

Biology, Chemistry, or Physics .....			4	(3,2)
Management and Organizational Behavior .....	BADM	338	3	(3,0)
Sport Facility Management.....	PESM	303	3	(3,0)
Sport Marketing .....	PESM	304	3	(3,0)
A Modern Language .....			3	(3,0)
Approved Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				

**SENIOR YEAR**

Internship in Sport Management.....	PESM	499	9	
Senior Seminar in Health, Exercise, Sport Science, and Physical Education.....	PESM	421	1	(1,0)
Legal Aspects of Sport .....	PESM	401	3	(3,0)
+2nd Year Advanced ROTC .....				

\*\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 127 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**HISTORY MAJOR**  
**First Semester**

FRESHMAN YEAR				
Composition and Literature .....	ENGL	101	3	(3,0)*
History of Western or World Civilization .....	HIST		3	(3,0)
United States History to 1865 .....	HIST	201	3	(3,0)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED	250	2	(2,0)
First Year Seminar.....	LDRS	101	1	(2,0)
**1st Year Basic ROTC .....				

SOPHOMORE YEAR

Major British Writers .....	ENGL	201	3	(3,0)
Elementary Mathematical Modeling.....	MATH	104***	3	(3,0)
History Elective .....	HIST		3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
**2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

JUNIOR YEAR

Group I History Elective.....	HIST		3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Group III History Elective .....	HIST		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
**1st Year Advanced ROTC .....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

SENIOR YEAR

Group I History Elective.....	HIST		3	(3,0)
Capstone Seminar .....	HIST		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+Approved Elective .....	PSCI		3	(3,0)
**2nd Year Advanced ROTC.....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

\*\*\*See page 114 for more choices.

+Must be numbered at the 300 or 400 level.

Group I (EUROPEAN): 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 333, 334, 335, 338, and 339.

Group II (UNITED STATES): 300, 301, 303, 304, 305, 307, 308, 309, 310, 311, 312, 314, 315, 316, 317, 318, and 320.

Group III (NON-WESTERN): 357, 358, 359, 360, 361, 362, 364, 365, 366, 367, and 368.

Group IV (MILITARY): 380, 382, 383, 384, 385, 386, 387, 391, and 393.

**HISTORY MAJOR**  
**Second Semester**

FRESHMAN YEAR				
Composition and Literature .....	ENGL	102	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
United States History since 1865 .....	HIST	202	3	(3,0)
Introduction to History.....	HIST	203	3	(3,0)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
**1st Year Basic ROTC .....				

SOPHOMORE YEAR

English, American or World Literature.....	ENGL****		3	(3,0)
Finite Mathematics.....	MATH	105***	3	(3,0)
American National Government .....	PSCI	102	3	(3,0)
Elective .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
**2nd Year Basic ROTC.....				

JUNIOR YEAR

Biology, Chemistry, or Physics .....			4	(3,2)
Group II History Elective.....	HIST		3	(3,0)
Group IV History Elective .....	HIST		3	(3,0)
+Approved Elective .....	Any SHSS		3	(3,0)
Elective .....			3	(3,0)
**1st Year Advanced ROTC .....				

SENIOR YEAR

Group II History Elective.....	HIST		3	(3,0)
History Elective .....	HIST		3	(3,0)
+Approved Elective .....	PSCI		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
**2nd Year Advanced ROTC.....				

\*\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**INTELLIGENCE AND SECURITY STUDIES MAJOR  
BUSINESS INTELLIGENCE CONCENTRATION**

**First Semester**

**FRESHMAN YEAR**

Composition and Literature I.....	ENGL	101	3	(3,0)*
History of Western or World Civilization .....	HIST		3	(3,0)
Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Required Physical Education .....	RPED	250	2	(2,0)
First Year Seminar.....	LDRS	101	1	(2,0)
**1st Year Basic ROTC .....				

**SOPHOMORE YEAR**

Introduction to Intelligence Studies .....	INTL	201	3	(3,0)
Major British Writers I.....	ENGL	201	3	(3,0)
Elementary Mathematical Modeling.....	MATH	104***	3	(3,0)
Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Required Physical Education .....	RPED		0	(0,1)
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)
**2nd Year Basic ROTC.....				

**JUNIOR YEAR**

Homeland Security.....	INTL	210	3	(3,0)
Advanced Analytics I.....	INTL	301	3	(3,0)
++History Elective.....	HIST		3	(3,0)
Introduction to Financial Accounting & Reporting ...	BADM	211	3	(3,0)
+++Business Intelligence Elective 1 .....	BADM		3	(3,0)
General Elective (may be taken either semester)....			3	(3,0)
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)
**1st Year Advanced ROTC .....				

**SENIOR YEAR**

Intelligence Support to Military Operations ..	INTL	401	3	(3,0)
+++Business Intelligence Elective 2 .....	BADM		3	(3,0)
Management Information Systems .....	BADM	417	3	(3,0)
General Intelligence Elective 1 .....			3	(3,0)
+Upper Level Elective 2 .....			3	(3,0)
Senior Leadership Integration Seminar.....	LDRS	411	0	(1,0)
**2nd Year Advanced ROTC.....				

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

\*\*\*See page 114 for more choices.

**INTELLIGENCE AND SECURITY STUDIES MAJOR  
BUSINESS INTELLIGENCE CONCENTRATION**

**Second Semester**

**FRESHMAN YEAR**

Composition and Literature II.....	ENGL	102	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Required Physical Education .....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
**1st Year Basic ROTC .....				

**SOPHOMORE YEAR**

English, American, or World Literature.....	ENGL****		3	(3,0)
Finite Mathematics.....	MATH	105***	3	(3,0)
Elective***** .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
**2nd Year Basic ROTC.....				

**JUNIOR YEAR**

Intelligence Collections Systems & Programs.....	INTL	310	3	(3,0)
Advanced Analytics II.....	INTL	302	3	(3,0)
Principles & Practices of Cybersecurity .....	CSCI	227	3	(3,0)
Introduction to Managerial Accounting .....	BADM	212	3	(3,0)
+Upper Level Elective 1 .....			3	(3,0)
**1st Year Advanced ROTC .....				

**SENIOR YEAR**

General Intelligence Elective 2.....			3	(3,0)
General Intelligence Elective 3.....			3	(3,0)
+Upper Level Elective 3 .....			3	(3,0)
+Upper Level Elective 4 .....			3	(3,0)
+Upper Level Elective 5 .....			3	(3,0)
**2nd Year Advanced ROTC.....				

\*\*\*\*ENGL 202, 215, 218, or 219

\*\*\*\*\*Choose from ANTH 202, HONR 203, PSCI 102, PSYC 201, or SOCI 201

+Must be numbered at the 300 or 400 level.

++Must be numbered at the 200 level or above.

+++Choose from BADM 217, 320, 327, or 329

HOURS REQUIRED FOR GRADUATION: 121 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**INTELLIGENCE AND SECURITY STUDIES MAJOR  
CHINESE AREA STUDIES CONCENTRATION**

**First Semester**

**FRESHMAN YEAR**

Composition and Literature I.....	ENGL	101	3	(3,0)*
History of Western or World Civilization .....	HIST		3	(3,0)
Introduction to Chinese I .....	CHIN	101	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Required Physical Education .....	RPED	250	2	(2,0)
First Year Seminar.....	LDRS	101	1	(2,0)

\*\*1st Year Basic ROTC .....

**SOPHOMORE YEAR**

Introduction to Intelligence Studies.....	INTL	201	3	(3,0)
Major British Writers I.....	ENGL	201	3	(3,0)
Elementary Mathematical Modeling.....	MATH	104***	3	(3,0)
Intermediate Chinese I .....	CHIN	201	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Required Physical Education .....	RPED		0	(0,1)
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

\*\*2nd Year Basic ROTC.....

**JUNIOR YEAR**

Homeland Security.....	INTL	210	3	(3,0)
Advanced Analytics I.....	INTL	301	3	(3,0)
++History Elective.....	HIST		3	(3,0)
Introduction to International Politics .....	PSCI	231	3	(3,0)
General Elective (may be taken either semester)....				
Chinese Area Studies Elective 1 .....			3	(3,0)
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

\*\*1st Year Advanced ROTC.....

**SENIOR YEAR**

Intelligence Support to Military Operations ..	INTL	401	3	(3,0)
Chinese Area Studies Elective 2 .....			3	(3,0)
Chinese Area Studies Elective 3 .....			3	(3,0)
Chinese Area Studies Elective 4 .....			3	(3,0)
+Upper Level Elective 2 .....			3	(3,0)
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*\*2nd Year Advanced ROTC.....

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

\*\*\*See page 114 for more choices

+Must be numbered at the 300 or 400 level

++Must be numbered at the 200 level or above

**INTELLIGENCE AND SECURITY STUDIES MAJOR  
CHINESE AREA STUDIES CONCENTRATION**

**Second Semester**

**FRESHMAN YEAR**

Composition and Literature II.....	ENGL	102	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Introduction to Chinese II .....	CHIN	102	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Required Physical Education .....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)

\*\*1st Year Basic ROTC .....

**SOPHOMORE YEAR**

English, American or World Literature.....	ENGL****		3	(3,0)
Finite Mathematics.....	MATH	105***	3	(3,0)
Elective***** .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Intermediate Chinese II.....	CHIN	202	3	(3,0)
Required Physical Education .....	RPED		0	(0,1)

\*\*2nd Year Basic ROTC.....

**JUNIOR YEAR**

Intelligence Collections Systems & Programs.....	INTL	310	3	(3,0)
Advanced Analytics II.....	INTL	302	3	(3,0)
Principles & Practices of Cybersecurity .....	CSCI	227	3	(3,0)
East Asian Affairs.....	PSCI	337	3	(3,0)
+Upper Level Elective 1 .....			3	(3,0)

\*\*1st Year Advanced ROTC.....

**SENIOR YEAR**

Chinese Area Studies Elective 5 .....			3	(3,0)
Chinese Area Studies Elective 6 .....			3	(3,0)
+Upper Level Elective 3 .....			3	(3,0)
+Upper Level Elective 4 .....			3	(3,0)
+Upper Level Elective 5 .....			3	(3,0)

\*\*2nd Year Advanced ROTC.....

\*\*\*\*ENGL 202, 215, 218, or 219

\*\*\*\*\*Choose from ANTH 202, HONR 203, PSCI 102, PSYC 201, or SOCI 201

HOURS REQUIRED FOR GRADUATION: 121 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**INTELLIGENCE AND SECURITY STUDIES MAJOR  
COUNTERTERRORISM CONCENTRATION**

**First Semester**

**FRESHMAN YEAR**

Composition and Literature I.....	ENGL	101	3	(3,0)*
History of Western or World Civilization .....	HIST		3	(3,0)
Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Required Physical Education .....	RPED	250	2	(2,0)
First Year Seminar.....	LDRS	101	1	(2,0)
**1st Year Basic ROTC .....				

**SOPHOMORE YEAR**

Introduction to Intelligence Studies .....	INTL	201	3	(3,0)
Major British Writers I.....	ENGL	201	3	(3,0)
Elementary Mathematical Modeling.....	MATH	104***	3	(3,0)
Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Required Physical Education .....	RPED		0	(0,1)
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)
**2nd Year Basic ROTC.....				

**JUNIOR YEAR**

Homeland Security.....	INTL	210	3	(3,0)
Advanced Analytics I.....	INTL	301	3	(3,0)
++History Elective.....	HIST		3	(3,0)
Domestic Terrorism.....	PSCI	310	3	(3,0)
International Politics .....	PSCI	231	3	(3,0)
General Elective.....			3	(3,0)
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)
**1st Year Advanced ROTC .....				

**SENIOR YEAR**

Intelligence Support to Military Operations ..	INTL	401	3	(3,0)
Counterterrorism Elective 1 .....			3	(3,0)
Counterterrorism Elective 2 .....			3	(3,0)
General Intelligence Elective 1 .....			3	(3,0)
+Upper Level Elective 2 .....			3	(3,0)
Senior Leadership Integration Seminar.....	LDRS	411	0	(1,0)
**2nd Year Advanced ROTC.....				

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

\*\*\*See page 114 for more choices.

**INTELLIGENCE AND SECURITY STUDIES MAJOR  
COUNTERTERRORISM CONCENTRATION**

**Second Semester**

**FRESHMAN YEAR**

Composition and Literature II.....	ENGL	102	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Required Physical Education .....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
**1st Year Basic ROTC .....				

**SOPHOMORE YEAR**

English, American, or World Literature .....	ENGL****		3	(3,0)
Finite Mathematics.....	MATH	105***	3	(3,0)
Elective***** .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
**2nd Year Basic ROTC.....				

**JUNIOR YEAR**

Intelligence Collections Systems & Programs .....	INTL	310	3	(3,0)
Advanced Analytics II.....	INTL	302	3	(3,0)
Principles & Practices of Cybersecurity .....	CSCI	227	3	(3,0)
International Terrorism .....	PSCI	342	3	(3,0)
+Upper Level Elective 1 .....			3	(3,0)
**1st Year Advanced ROTC .....				

**SENIOR YEAR**

Counterterrorism Elective 3.....			3	(3,0)
General Intelligence Elective 2 .....			3	(3,0)
+Upper Level Elective 3 .....			3	(3,0)
+Upper Level Elective 4 .....			3	(3,0)
+Upper Level Elective 5 .....			3	(3,0)
**2nd Year Advanced ROTC.....				

\*\*\*\*ENGL 202, 215, 218, or 219

\*\*\*\*\*Choose from ANTH 202, HONR 203, PSCI 102, PSYC 201, or SOCI 201

+Must be numbered at the 300 or 400 level.

++Must be numbered at the 200 level or above.

HOURS REQUIRED FOR GRADUATION: 121 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**INTELLIGENCE AND SECURITY STUDIES MAJOR  
GENERAL CONCENTRATION**

**First Semester**

FRESHMAN YEAR

Composition and Literature I.....	ENGL	101	3	(3,0)*
History of Western or World Civilization .....	HIST		3	(3,0)
Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics.....			4	(3,2)
Required Physical Education .....	RPED	250	2	(2,0)
First Year Seminar.....	LDRS	101	1	(2,0)
**1st Year Basic ROTC .....				

SOPHOMORE YEAR

Introduction to Intelligence Studies.....	INTL	201	3	(3,0)
Major British Writers I.....	ENGL	201	3	(3,0)
Elementary Mathematical Modeling.....	MATH	104***	3	(3,0)
Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics.....			4	(3,2)
Required Physical Education .....	RPED		0	(0,1)
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)
**2nd Year Basic ROTC.....				

JUNIOR YEAR

Homeland Security.....	INTL	210	3	(3,0)
Advanced Analytics I.....	INTL	301	3	(3,0)
++History Elective.....	HIST		3	(3,0)
General Elective (may be taken either semester).....			3	(3,0)
General Intelligence Elective 1 .....			3	(3,0)
+Upper Level Elective 1.....			3	(3,0)
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)
**1st Year Advanced ROTC .....				

SENIOR YEAR

Intelligence Support to Military Operations ..	INTL	401	3	(3,0)
General Intelligence Elective 3 .....			3	(3,0)
General Intelligence Elective 4.....			3	(3,0)
General Intelligence Elective 5.....			3	(3,0)
+Upper Level Elective 3 .....			3	(3,0)
Senior Leadership Integration Seminar.....	LDRS	411	0	(1,0)
**2nd Year Advanced ROTC.....				

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

\*\*\*See page 114 for more choices.

**INTELLIGENCE AND SECURITY STUDIES MAJOR  
GENERAL CONCENTRATION**

**Second Semester**

FRESHMAN YEAR

Composition and Literature II.....	ENGL	102	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics.....			4	(3,2)
Required Physical Education .....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
**1st Year Basic ROTC .....				

SOPHOMORE YEAR

English, American, or World Literature.....	ENGL****		3	(3,0)
Finite Mathematics.....	MATH	105***	3	(3,0)
Elective***** .....			3	(3,0)
Biology, Chemistry, or Physics.....			4	(3,2)
Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
**2nd Year Basic ROTC.....				

JUNIOR YEAR

Intelligence Collections Systems & Programs .....	INTL	310	3	(3,0)
Advanced Analytics II.....	INTL	302	3	(3,0)
Principles & Practices of Cybersecurity .....	CSCI	227	3	(3,0)
General Intelligence Elective 2 .....			3	(3,0)
+Upper Level Elective 2 .....			3	(3,0)
**1st Year Advanced ROTC .....				

SENIOR YEAR

General Intelligence Elective 6.....			3	(3,0)
General Intelligence Elective 7.....			3	(3,0)
General Intelligence Elective 8.....			3	(3,0)
+Upper Level Elective 4 .....			3	(3,0)
+Upper Level Elective 5 .....			3	(3,0)
**2nd Year Advanced ROTC.....				

\*\*\*\*ENGL 202, 215, 218, or 219

\*\*\*\*\*Choose from ANTH 202, HONR 203, PSCI 102, PSYC 201, or SOCI 201

+Must be numbered at the 300 or 400 level.

++Must be numbered at the 200 level or above.

HOURS REQUIRED FOR GRADUATION: 121 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.



**INTELLIGENCE AND SECURITY STUDIES MAJOR  
MILITARY INTELLIGENCE CONCENTRATION**

**First Semester**

FRESHMAN YEAR

Composition and Literature I.....	ENGL	101	3	(3,0)*
History of Western or World Civilization .....	HIST		3	(3,0)
Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Required Physical Education .....	RPED	250	2	(2,0)
First Year Seminar.....	LDRS	101	1	(2,0)
**1st Year Basic ROTC .....				

SOPHOMORE YEAR

Introduction to Intelligence Studies.....	INTL	201	3	(3,0)
Major British Writers I.....	ENGL	201	3	(3,0)
Math Sequence I .....	MATH	104***	3	(3,0)
Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Required Physical Education .....	RPED		0	(0,1)
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)
**2nd Year Basic ROTC.....				

JUNIOR YEAR

Homeland Security.....	INTL	210	3	(3,0)
Advanced Analytics I.....	INTL	301	3	(3,0)
++History Elective.....	HIST		3	(3,0)
Military Intelligence Elective 1 .....			3	(3,0)
Military Intelligence Elective 2 .....			3	(3,0)
General Elective (may be taken either semester).....			3	(3,0)
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)
**1st Year Advanced ROTC .....				

SENIOR YEAR

Intelligence Support to Military Operations..	INTL	401	3	(3,0)
Military Intelligence Elective 4 .....			3	(3,0)
Military Intelligence Elective 5 .....			3	(3,0)
General Intelligence Elective 1 .....			3	(3,0)
+Upper Level Elective 2 .....			3	(3,0)
Senior Leadership Integration Seminar.....	LDRS	411	0	(1,0)
**2nd Year Advanced ROTC.....				

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

\*\*\*See page 114 for more choices.

**INTELLIGENCE AND SECURITY STUDIES MAJOR  
MILITARY INTELLIGENCE CONCENTRATION**

**Second Semester**

FRESHMAN YEAR

Composition and Literature II.....	ENGL	102	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Modern Language .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Required Physical Education .....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
**1st Year Basic ROTC .....				

SOPHOMORE YEAR

English, American, or World Literature.....	ENGL****		3	(3,0)
Finite Mathematics.....	MATH	105***	3	(3,0)
Elective***** .....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
**2nd Year Basic ROTC.....				

JUNIOR YEAR

Intelligence Collections Systems & Programs .....	INTL	310	3	(3,0)
Advanced Analytics II.....	INTL	302	3	(3,0)
Principles & Practices of Cybersecurity .....	CSCI	227	3	(3,0)
Military Intelligence Elective 3 .....			3	(3,0)
+Upper Level Elective 1 .....			3	(3,0)
**1st Year Advanced ROTC .....				

SENIOR YEAR

Military Intelligence Elective 6 .....			3	(3,0)
General Intelligence Elective 2.....			3	(3,0)
+Upper Level Elective 3 .....			3	(3,0)
+Upper Level Elective 4 .....			3	(3,0)
+Upper Level Elective 5 .....			3	(3,0)
**2nd Year Advanced ROTC.....				

\*\*\*\*ENGL 202, 215, 218, or 219

\*\*\*\*\*Choose from ANTH 202, HONR 203, PSCI 102, PSYC 201, or SOCI 201

+Must be numbered at the 300 or 400 level.

++Must be numbered at the 200 level or above.

HOURS REQUIRED FOR GRADUATION: 121 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**MATHEMATICS MAJOR****First Semester**

## FRESHMAN YEAR

Composition and Literature .....	ENGL	101	3	(3,0)*
A Modern Language .....			3	(3,0)
Analytic Geometry and Calculus I.....	MATH	131	4	(4,0)
Introduction to the Practice of Mathematics..	MATH	121	3	(3,0)
+1st Year Basic ROTC.....				
Required Physical Education .....	RPED	250	2	(2,0)
First Year Seminar.....	LDRS	101	1	(2,0)

## SOPHOMORE YEAR

Technical Writing and Communication .....	COMM	260	3	(3,0)
Analytic Geometry and Calculus III.....	MATH	231	4	(4,0)
Introduction to Discrete Structures .....	MATH	206	3	(3,0)
A Modern Language .....			3	(3,0)
***Biology, Chemistry, or Physics .....			4	(3,2)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

## JUNIOR YEAR

History of Western or World Civilization .....	HIST		3	(3,0)
***Biology, Chemistry, or Physics .....			4	(3,2)
Modern Algebra I.....	MATH	303	3	(3,0)
**Mathematics Elective.....	MATH		3	(3,0)
Social Science Core Course.....			3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

## SENIOR YEAR

Senior Seminar in Mathematics .....	MATH	495	3	(3,0)
**Mathematics Elective.....	MATH		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*Any mathematics course numbered at the 300 or 400 level.

\*\*\*Science must be CHEM 151 (161)/CHEM 152 (162) or BIOL 101 (111)/BIOL 102 (112) or PHYS 221 (271), PHYS 222 (272).

+ ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

++ A student must complete one of ENGL 201, 202, 215, 218, or 219.

**MATHEMATICS MAJOR****Second Semester**

## FRESHMAN YEAR

Composition and Literature .....	ENGL	102	3	(3,0)
A Modern Language .....			3	(3,0)
Analytic Geometry and Calculus II .....	MATH	132	4	(4,0)
Introduction to Computer Science I.....	CSCI	201	4	(3,2)
+1st Year Basic ROTC.....				
Required Physical Education .....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)

## SOPHOMORE YEAR

Applied Mathematics I.....	MATH	234	4	(4,0)
Linear Algebra .....	MATH	240	3	(3,0)
Introduction to Probability and Statistics.....	STAT	261	3	(3,0)
***Biology, Chemistry, or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)

## JUNIOR YEAR

History of Western or World Civilization .....	HIST		3	(3,0)
***Biology, Chemistry or Physics.....			4	(3,2)
++English.....	ENGL		3	(3,0)
**Mathematics Elective.....	MATH		3	(3,0)
Introduction to Analysis I.....	MATH	403	3	(3,0)
+1st Year Advanced ROTC.....				

## SENIOR YEAR

Mathematical Models and Applications.....	MATH	470	3	(3,0)
**Mathematics Elective.....	MATH		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 125 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**MECHANICAL ENGINEERING MAJOR****First Semester****FRESHMAN YEAR**

Composition and Literature .....	ENGL	101	3	(3,0)*
++Approved Science.....	CHEM		3	(3,0)
+++Approved Science Laboratory.....	CHEM		1	(0,2)
Analytic Geometry and Calculus I.....	MATH	131	4	(4,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Introduction to Mechanical Engineering .....	MECH	101	1	(0,2)
First Year Seminar.....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)
+1st Year Basic ROTC .....				

**SOPHOMORE YEAR**

Technical Writing and Communication .....	COMM	260	3	(3,0)
Physics with Calculus II.....	PHYS	222	3	(3,0)
Physics with Calculus II Laboratory.....	PHYS	272	1	(0,2)
Analytic Geometry and Calculus III.....	MATH	231	4	(4,0)
Computer Applications w/Lab .....	MECH	325	3	(2,2)
Statics.....	CIVL	202	3	(3,0)
+2nd Year Basic ROTC.....				
Sophomore Seminar/Lab.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

**JUNIOR YEAR**

Thermo-Fluid Systems I w/Lab .....	MECH	310	3	(2,2)
Engineering Materials w/Lab.....	MECH	304	3	(2,2)
Measurements & Instrumentation w/Lab.....	MECH	330	3	(2,2)
Manufacturing Processes w/Lab .....	MECH	340	3	(2,2)
Modeling & Analysis of Dynamic Systems I .....	MECH	350	3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Heat Transfer.....	MECH	415	3	(3,0)
**Technical Elective .....			3	(3,0)
Senior Design I .....	MECH	481	3	(2,2)
Mechatronics w/Lab.....	MECH	450	3	(2,2)
***ME Option I .....	MECH		3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

+ROTC hours (credits, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*Select CIVL, ELEC, or MECH 300- or 400-level courses.

\*\*\*Select two courses from one of five option areas to fulfill ME Option I and II.

\*\*\*\*To be selected from an approved list of courses in the humanities or social sciences.

\*\*\*\*\*Select a MECH 400-level course

++CHEM 140 or CHEM 151

+++CHEM 141 or CHEM 161

**MECHANICAL ENGINEERING MAJOR****Second Semester****FRESHMAN YEAR**

Composition and Literature .....	ENGL	102	3	(3,0)
++++Approved Science .....			3	(3,0)
+++++Approved Science Laboratory .....			1	(0,2)
Analytic Geometry and Calculus II .....	MATH	132	4	(4,0)
Physics with Calculus I.....	PHYS	221	3	(3,0)
Physics with Calculus I Laboratory .....	PHYS	271	1	(0,2)
Engineering Computer Applications.....	MECH	102	2	(0,4)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)
+1st Year Basic ROTC .....				

**SOPHOMORE YEAR**

English, American, or World Literature.....	ENGL		3	(3,0)
Applied Mathematics I.....	MATH	234	4	(4,0)
Principles of Electrical Engineering .....	ELEC	208	3	(2,2)
Dynamics .....	CIVL	203	3	(3,0)
Mechanics of Materials.....	CIVL	304	3	(3,0)
Materials Laboratory.....	CIVL	307	1	(0,2)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

**JUNIOR YEAR**

History of Western or World Civilization .....	HIST		3	(3,0)
Thermo-Fluid Systems II w/Lab.....	MECH	311	3	(2,2)
Machine Design .....	MECH	345	3	(3,0)
Modeling and Analysis of Dynamic Systems II w/Lab .....	MECH	351	3	(2,2)
Computational Methods in Engineering .....	MECH	365	3	(3,0)
Mechanical Engineering System Design .....	MECH	460	3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+1st Year Advanced ROTC.....				

**SENIOR YEAR**

Senior Design II .....	MECH	482	3	(1,4)
***ME Option II.....	MECH		3	(3,0)
***Social Science Core Course.....			3	(3,0)
****Mechanical Elective.....	MECH		3	(3,0)
****Adv. Humanities/Social Science Course .....			3	(3,0)
+2nd Year Advanced ROTC .....				

++++BIOL 150 or CHEM 152

+++++BIOL 151 or CHEM 162

HOURS REQUIRED FOR GRADUATION: 131 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements

**MODERN LANGUAGES, LITERATURES AND CULTURES MAJOR****French Track****First Semester****FRESHMAN YEAR**

Elementary French Communication I.....	FREN	101	3	(3,0)*
Composition and Literature .....	ENGL	101	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History of Western or World Civilization .....	HIST		3	(3,0)
+1st Year Basic ROTC .....				
First Year Seminar.....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)

**SOPHOMORE YEAR**

Intermediate French Communication .....	FREN	201	3	(3,0)
Major British Writers .....	ENGL	201	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Elementary Mathematical Modeling.....	MATH	104**	3	(3,0)
Social Science Core Course.....			3	(3,0)
Elective .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

**JUNIOR YEAR**

Advanced French Conversation.....	FREN	301	3	(3,0)
Advanced Modern Language.....	FREN		3	(3,0)
Advanced Modern Language.....	FREN		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Advanced Modern Language.....	FREN		3	(3,0)
Advanced Modern Language.....	FREN		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**MODERN LANGUAGES, LITERATURES AND CULTURES MAJOR****French Track****Second Semester****FRESHMAN YEAR**

Elementary French Communication II.....	FREN	102	3	(3,0)
Composition and Literature .....	ENGL	102	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History of Western or World Civilization .....	HIST		3	(3,0)
+1st Year Basic ROTC .....				
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)

**SOPHOMORE YEAR**

French Reading, Conversation and Composition.....	FREN	202	3	(3,0)
English, American, or World Literature.....	ENGL***		3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Finite Mathematics.....	MATH	105**	3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

**JUNIOR YEAR**

Advanced French Composition.....	FREN	302	3	(3,0)
Advanced Modern Language.....	FREN		3	(3,0)
Advanced Modern Language.....	FREN		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				

**SENIOR YEAR**

Advanced Modern Language.....	FREN		3	(3,0)
Advanced Modern Language.....	FREN		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 123 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**MODERN LANGUAGES, LITERATURES AND CULTURES MAJOR****Teaching Specialization in French Track****First Semester****FRESHMAN YEAR**

Elementary French Communication I.....	FREN	101	3	(3,0)*
Composition and Literature .....	ENGL	101	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History of Western or World Civilization .....	HIST		3	(3,0)
+1st Year Basic ROTC .....				
First Year Seminar.....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)

**SOPHOMORE YEAR**

Intermediate French Communication .....	FREN	201	3	(3,0)
Major British Writers .....	ENGL	201	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Elementary Mathematical Modeling.....	MATH	104**	3	(3,0)
Education in Modern Society.....	EDUC	101	3	(3,0)
Social Science Core Course .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

**JUNIOR YEAR**

Advanced French Conversation.....	FREN	301	3	(3,0)
Advanced Modern Language.....	FREN		3	(3,0)
Advanced Modern Language.....	FREN		3	(3,0)
Learners with Exceptionalities.....	EDUC	312	3	(3,0)
Adolescent Development .....	EDUC	206	3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Advanced Modern Language.....	FREN		3	(3,0)
Advanced Modern Language.....	FREN		3	(3,0)
Advanced Modern Language.....	FREN		3	(3,0)
Advanced Modern Language.....	FREN		3	(3,0)
Teaching Reading in Middle & High School.	EDUC	306	3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**MODERN LANGUAGES, LITERATURES AND CULTURES MAJOR****Teaching Specialization in French Track****Second Semester****FRESHMAN YEAR**

Elementary French Communication II.....	FREN	102	3	(3,0)
Composition and Literature .....	ENGL	102	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History of Western or World Civilization .....	HIST		3	(3,0)
Elective .....			3	(3,0)
+1st Year Basic ROTC .....				
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)

**SOPHOMORE YEAR**

French Reading, Conversation and Composition.....	FREN	202	3	(3,0)
English, American, or World Literature.....	ENGL***		3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Finite Mathematics.....	MATH	105**	3	(3,0)
Educational Psychology.....	EDUC	202	3	(3,0)
Elective .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

**JUNIOR YEAR**

Advanced French Composition.....	FREN	302	3	(3,0)
Advanced Modern Language.....	FREN		3	(3,0)
Child Development .....	EDUC	307	3	(3,0)
Methods & Materials-Middle & High School	EDUC	401	3	(3,0)
+1st & 2nd Year Advanced ROTC.....				

**SENIOR YEAR**

Theory & Practice of Foreign-Language.....	MLNG	455	3	(3,0)
Teaching				
Internship in Teaching.....	EDUC	499	12	

**SEE NOTE AT BOTTOM OF PAGE 189.**

\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 123 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**MODERN LANGUAGES, LITERATURES AND CULTURES MAJOR****German Track  
First Semester****FRESHMAN YEAR**

Elementary German I.....	GERM	101	3	(3,0)*
Composition and Literature .....	ENGL	101	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History of Western or World Civilization .....	HIST		3	(3,0)
+1st Year Basic ROTC.....				
First Year Seminar.....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)

**SOPHOMORE YEAR**

Intermediate German I.....	GERM	201	3	(3,0)
Major British Writers .....	ENGL	201	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Elementary Mathematical Modeling.....	MATH	104**	3	(3,0)
Social Science Core Course.....			3	(3,0)
Elective .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

**JUNIOR YEAR**

Advanced German Conversation .....	GERM	301	3	(3,0)
Advanced Modern Language .....	GERM		3	(3,0)
Advanced Modern Language.....	GERM		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Advanced Modern Language.....	GERM		3	(3,0)
Advanced Modern Language.....	GERM		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

+ ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**MODERN LANGUAGES, LITERATURES AND CULTURES MAJOR****German Track  
Second Semester****FRESHMAN YEAR**

Elementary German II.....	GERM	102	3	(3,0)
Composition and Literature .....	ENGL	102	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History of Western or World Civilization .....	HIST		3	(3,0)
+1st Year Basic ROTC.....				
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)

**SOPHOMORE YEAR**

Intermediate German II.....	GERM	202	3	(3,0)
English, American, or World Literature.....	ENGL***		3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Finite Mathematics.....	MATH	105**	3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

**JUNIOR YEAR**

Advanced German Composition.....	GERM	302	3	(3,0)
Advanced Modern Language.....	GERM		3	(3,0)
Advanced Modern Language.....	GERM		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				

**SENIOR YEAR**

Advanced Modern Language.....	GERM		3	(3,0)
Advanced Modern Language.....	GERM		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 123 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**MODERN LANGUAGES, LITERATURES AND CULTURES MAJOR**  
**Teaching Specialization in German Track**  
**First Semester**

<b>FRESHMAN YEAR</b>				
Elementary German I.....	GERM	101	3	(3,0)*
Composition and Literature .....	ENGL	101	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History of Western or World Civilization .....	HIST		3	(3,0)
+1st Year Basic ROTC .....				
First Year Seminar.....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)
<b>SOPHOMORE YEAR</b>				
Intermediate German I.....	GERM	201	3	(3,0)
Major British Writers .....	ENGL	201	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Education in Modern Society.....	EDUC	101	3	(3,0)
Social Science Core Course.....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)
<b>JUNIOR YEAR</b>				
Advanced German Conversation.....	GERM	301	3	(3,0)
Advanced Modern Language.....	GERM		3	(3,0)
Advanced Modern Language.....	GERM		3	(3,0)
Learners with Exceptionalities.....	EDUC	312	3	(3,0)
Adolescent Development.....	EDUC	206	3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)
<b>SENIOR YEAR</b>				
Advanced Modern Language.....	GERM		3	(3,0)
Advanced Modern Language.....	GERM		3	(3,0)
Advanced Modern Language.....	GERM		3	(3,0)
Advanced Modern Language.....	GERM		3	(3,0)
Teaching Reading in Middle & High School.	EDUC	306	3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**MODERN LANGUAGES, LITERATURES AND CULTURES MAJOR**  
**Teaching Specialization in German Track**  
**Second Semester**

<b>FRESHMAN YEAR</b>				
Elementary German II.....	GERM	102	3	(3,0)
Composition and Literature .....	ENGL	102	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History of Western or World Civilization .....	HIST		3	(3,0)
Elementary Mathematical Modeling.....	MATH	104**	3	(3,0)
Elective .....			3	(3,0)
+1st Year Basic ROTC.....				
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)
<b>SOPHOMORE YEAR</b>				
Intermediate German II.....	GERM	202	3	(3,0)
English, American, or World Literature.....	ENGL***		3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Finite Mathematics.....	MATH	105**	3	(3,0)
Educational Psychology.....	EDUC	202	3	(3,0)
Elective .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
<b>JUNIOR YEAR</b>				
Advanced German Composition.....	GERM	302	3	(3,0)
Advanced Modern Language.....	GERM		3	(3,0)
Child Development .....	EDUC	307	3	(3,0)
Methods & Materials-Middle & High School	EDUC	401	3	(3,0)
+1st & 2nd Year Advanced ROTC.....				
<b>SENIOR YEAR</b>				
Theory & Practice of Foreign-Language .....	MLNG	455	3	(3,0)
Teaching				
Internship in Teaching.....	EDUC	499	12	

**SEE NOTE AT BOTTOM OF PAGE 189.**

\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 123 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**MODERN LANGUAGES, LITERATURES AND CULTURES MAJOR****Spanish Track****First Semester****FRESHMAN YEAR**

Elementary Spanish Communication I .....	SPAN	101	3	(3,0)*
Composition and Literature .....	ENGL	101	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History of Western or World Civilization .....	HIST		3	(3,0)
+1st Year Basic ROTC .....				
First Year Seminar .....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)

**SOPHOMORE YEAR**

Intermediate Spanish Communication .....	SPAN	201	3	(3,0)
Major British Writers .....	ENGL	201	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Elementary Mathematical Modeling .....	MATH	104**	3	(3,0)
Social Science Core Course .....			3	(3,0)
Elective .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC .....				
Sophomore Seminar .....	LDRS	201/	1	(1,0)
(211 may be taken either semester) .....	LDRS	211	0	(0,1)

**JUNIOR YEAR**

Advanced Spanish Conversation .....	SPAN	301	3	(3,0)
Advanced Modern Language .....	SPAN	305	3	(3,0)
Advanced Modern Language .....	SPAN		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+1st Year Advanced ROTC .....				
Junior Ethics Enrichment Experience .....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Advanced Modern Language .....	SPAN		3	(3,0)
Advanced Modern Language .....	SPAN		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

+ ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**MODERN LANGUAGES, LITERATURES AND CULTURES MAJOR****Spanish Track****Second Semester****FRESHMAN YEAR**

Elementary Spanish Communication II .....	SPAN	102	3	(3,0)
Composition and Literature .....	ENGL	102	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History of Western or World Civilization .....	HIST		3	(3,0)
+1st Year Basic ROTC .....				
Freshman Ethical Fitness Seminar .....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)

**SOPHOMORE YEAR**

Spanish Conversation, Reading and Composition .....	SPAN	202	3	(3,0)
English, American or World Literature .....	ENGL***		3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Finite Mathematics .....	MATH	105**	3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC .....				

**JUNIOR YEAR**

Advanced Spanish Composition .....	SPAN	302	3	(3,0)
Advanced Modern Language .....	SPAN		3	(3,0)
Advanced Modern Language .....	SPAN		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+1st Year Advanced ROTC .....				

**SENIOR YEAR**

Advanced Modern Language .....	SPAN		3	(3,0)
Advanced Modern Language .....	SPAN		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 123 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.



**MODERN LANGUAGES, LITERATURES AND CULTURES MAJOR****Teaching Specialization in Spanish Track****First Semester****FRESHMAN YEAR**

Elementary Spanish Communication I .....	SPAN	101	3	(3,0)*
Composition and Literature .....	ENGL	101	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History of Western or World Civilization .....	HIST		3	(3,0)
+1st Year Basic ROTC .....				
First Year Seminar .....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)

**SOPHOMORE YEAR**

Intermediate Spanish Communication .....	SPAN	201	3	(3,0)
Major British Writers .....	ENGL	201	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Elementary Mathematical Modeling .....	MATH	104**	3	(3,0)
Education in Modern Society .....	EDUC	101	3	(3,0)
Social Science Core Course .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC .....				
Sophomore Seminar .....	LDRS	201/	1	(1,0)
(211 may be taken either semester) .....	LDRS	211	0	(0,1)

**JUNIOR YEAR**

Advanced Spanish Conversation .....	SPAN	301	3	(3,0)
Advanced Modern Language .....	SPAN	305	3	(3,0)
Advanced Modern Language .....	SPAN		3	(3,0)
Learners with Exceptionalities .....	EDUC	312	3	(3,0)
Adolescent Development .....	EDUC	206	3	(3,0)
+1st Year Advanced ROTC .....				
Junior Ethics Enrichment Experience .....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Advanced Modern Language .....	SPAN		3	(3,0)
Advanced Modern Language .....	SPAN		3	(3,0)
Advanced Modern Language .....	SPAN		3	(3,0)
Advanced Modern Language .....	SPAN		3	(3,0)
Teaching Reading in Middle & High School .....	EDUC	306	3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**MODERN LANGUAGES, LITERATURES AND CULTURES MAJOR****Teaching Specialization in Spanish Track****Second Semester****FRESHMAN YEAR**

Elementary Spanish Communication II .....	SPAN	102	3	(3,0)
Composition and Literature .....	ENGL	102	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History of Western or World Civilization .....	HIST		3	(3,0)
Elective .....			3	(3,0)
+1st Year Basic ROTC .....				
Freshman Ethical Fitness Seminar .....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)

**SOPHOMORE YEAR**

Spanish Conversation, Reading and Composition .....	SPAN	202	3	(3,0)
English, American or World Literature .....	ENGL***		3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Finite Mathematics .....	MATH	105**	3	(3,0)
Educational Psychology .....	EDUC	202	3	(3,0)
Elective .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC .....				

**JUNIOR YEAR**

Advanced Spanish Composition .....	SPAN	302	3	(3,0)
Advanced Modern Language .....	SPAN		3	(3,0)
Child Development .....	EDUC	307	3	(3,0)
Methods & Materials-Middle & High School .....	EDUC	401	3	(3,0)
+1st & 2nd Year Advanced ROTC .....				

**SENIOR YEAR**

Theory & Practice of Foreign-Language .....	MLNG	455	3	(3,0)
Teaching				
Internship in Teaching .....	EDUC	499	12	

\*\*\*ENGL 202, 215, 218, or 219

**SEE NOTE AT BOTTOM OF PAGE 189.**

HOURS REQUIRED FOR GRADUATION: 123 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**NURSING MAJOR**  
**First Semester**

## FRESHMAN YEAR

Composition and Literature .....	ENGL	101	3	(3,0)*
Introduction to Biology I .....	BIOL	130	3	(3,2)
Introduction to Biology I Laboratory.....	BIOL	131	1	(0,2)
Introduction to Chemistry I.....	CHEM	103	3	(3,0)
Introduction to Chemistry I Laboratory.....	CHEM	113	1	(0,2)
Elementary Mathematical Modeling.....	MATH	104**	3	(3,0)
First Year Seminar.....	LDRS	101	1	(2,0)
Required Physical Education .....	RPED	250	2	(2,0)
+1st Year Basic ROTC.....				

## SOPHOMORE YEAR

Introduction to Sociology .....	SOCI	201	3	(3,0)
Human Anatomy & Physiology II .....	BIOL	218	3	(3,0)
Human Anatomy & Physiology II Laboratory	BIOL	228	1	(0,2)
Fundamentals of Nursing.....	NURS	202	4	(3,2)
General Psychology .....	PSYC	201	3	(3,0)
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

## JUNIOR YEAR

Adult Health I .....	NURS	301	3	(3,0)
Adult Health I Clinical & Laboratory .....	NURS	311	2	(0,6)
History of Western or World Civilization .....	HIST		3	(3,0)
Research Design in Psychology.....	PSYC	203	3	(3,0)
A Modern Language .....			3	(3,0)
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)
+1st Year Advanced ROTC.....				

## SENIOR YEAR

***Maternal-Child Health OR.....	NURS	401/	5	(3,6)
Community & Mental Health .....		402		
Evidence Based Practice .....	NURS	403	3	(3,0)
A Modern Language .....			3	(3,0)
Major British Writers .....	ENGL	201	3	(3,0)
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)
+2nd Year Advanced ROTC .....				

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

\*\*\*Students elect either NURS 401 or 402 in the fall semester and then elect the second course in the spring semester.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours

**NURSING MAJOR**  
**Second Semester**

## FRESHMAN YEAR

Composition and Literature .....	ENGL	102	3	(3,0)
Human Anatomy & Physiology I.....	BIOL	217	3	(3,0)
Human Anatomy & Physiology I Laboratory	BIOL	227	1	(0,2)
Introduction to Chemistry II .....	CHEM	104	3	(3,0)
Introduction to Chemistry II Laboratory.....	CHEM	114	1	(0,2)
Introduction to Nursing.....	NURS	200	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
Required Physical Education .....	RPED	251	2	(2,0)
+1st Year Basic ROTC.....				

## SOPHOMORE YEAR

Microbiology.....	BIOL	290	4	(3,3)
Health Assessment .....	NURS	201	4	(3,2)
Pathophysiology.....	BIOL	340	3	(3,0)
Pharmacology .....	BIOL	341	3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

## JUNIOR YEAR

Adult Health II .....	NURS	302	3	(3,0)
Adult Health II Clinical & Laboratory.....	NURS	312	2	(0,6)
History of Western or World Civilization .....	HIST		3	(3,0)
A Modern Language .....			3	(3,0)
Nutrition.....	HLED	401	3	(3,0)
Statistical Methods.....	STAT	160	3	(3,0)
+1st Year Advanced ROTC.....				

## SENIOR YEAR

***Maternal-Child Health OR.....	NURS	401/	5	(3,6)
Community & Mental Health .....		402		
Nursing Leadership.....	NURS	404	3	(3,0)
Capstone.....	NURS	405	2	****
A Modern Language .....			3	(3,0)
English, American or World Literature.....	ENGL *****		3	(3,0)
+2nd Year Advanced ROTC .....				

\*\*\*\*An intensive course that occurs over the last three weeks of the semester; includes a 72-hour precepted clinical experience accompanied by 8 hours of lecture.

\*\*\*\*\* ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 118 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**PRE-PHYSICAL EDUCATION****Teaching Track****First Semester**

## FRESHMAN YEAR

General Biology I.....	BIOL	101	3	(3,0)*
General Biology I Laboratory.....	BIOL	111	1	(0,2)
Composition and Literature.....	ENGL	101	3	(3,0)
Elementary Mathematical Modeling.....	MATH	104**	3	(3,0)
History of Western or World Civilization.....	HIST		3	(3,0)
Introduction to Health and Human Performance.....	PHED	101	3	(3,0)
Contemporary Health Foundations.....	RPED	250	2	(2,0)
+1st Year Basic ROTC.....				
First Year Seminar.....	LDRS	101	1	(2,0)

## SOPHOMORE YEAR

Human Anatomy and Physiology II.....	BIOL	218	3	(3,0)
Human Anatomy and Physiology II Laboratory.....	BIOL	228	1	(0,2)
Major British Writers.....	ENGL	201	3	(3,0)
Advanced Performance and Athlete Development: Individual and Dual Sports... Adolescent Development.....	PHED	350	3	(3,0)
Activity Course.....	EDUC	206	3	(3,0)
+2nd Year Basic ROTC.....	RPED		0	(0,1)
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

**PRE-PHYSICAL EDUCATION****Teaching Track****Second Semester**

## FRESHMAN YEAR

Human Anatomy and Physiology I.....	BIOL	217	3	(3,0)
Human Anatomy and Physiology I Laboratory.....	BIOL	227	1	(0,2)
Composition and Literature.....	ENGL	102	3	(3,0)
History of Western or World Civilization.....	HIST		3	(3,0)
Statistical Methods.....	STAT	160**	3	(3,0)
Social Science Core Course.....			3	(3,0)
Foundations of Fitness & Exercise.....	RPED	251	2	(2,0)
+1st Year Basic ROTC.....				
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)

## SOPHOMORE YEAR

English, American, or World Literature.....	ENGL***		3	(3,0)
Motor Development and Learning.....	EXSC	200	3	(3,0)
Foundations in Literacy.....	EDUC	301	3	(3,0)
First Aid and CPR.....	RPED	113	0	(0,0)
Educational Psychology.....	EDUC	202	3	(3,0)
General Elective.....			3	(3,0)
Required Physical Education.....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

\*\*\*ENGL 202, 215, 218, or 219

NOTE: Acceptance into the PETC is based on the following criteria:

1. Official record of passing score on all three parts of the PRAXIS Core or record of an SAT/ACT score that resulted in exemption from this requirement.
2. Maintained a cumulative Grade Point Average of 2.75 or higher on at least 45 hours of course work at The Citadel.
3. Successfully completed EDUC 202/307; EXSC 200; PHED 101, 335/350 with a C or better.

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

+ROTC hours (credits, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**PHYSICAL EDUCATION****Teaching Track****First Semester**

<b>JUNIOR YEAR</b>				
Biomechanical Kinesiology .....	EXSC	314	3	(3,0)*
Physical Science (Chemistry or Physics).....			4	(3,2)
Introduction To PE and Coaching .....	PHED	201	3	(3,0)
Advanced Performance and Athlete Development: Team Sports.....	PHED	335	3	(3,0)
Development: Individual and Dual Sports...				
**Learners with Exceptionalities.....	EDUC	312	3	(3,0)
+1st Year Advanced ROTC .....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)
<b>SENIOR YEAR</b>				
Measurement and Evaluation.....	EXSC	305	3	(3,0)
Physiology of Exercise I.....	EXSC	319	3	(3,0)
Physiology of Exercise I Lab.....	EXSC	329	1	(0,2)
Methods of Teaching Team Sports.....	PHED	460	3	(3,0)
Health and Physical Education Middle and High School .....	EDUC	306	3	(3,0)
General Elective.....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*PHED 203 may also be taken.

+ROTC hours (credits, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

**PHYSICAL EDUCATION****Teaching Track****Second Semester**

<b>JUNIOR YEAR</b>				
Physical Science (Chemistry or Physics).....			4	(3,2)
Elementary School Physical Education .....	PHED	433	3	(3,0)
Advocacy and Accountability in Public Health & Education .....	HLED	407	3	(3,0)
Administration of Health, Exercise, Sport Science, and Physical Education Child Development	PHED	404	3	(3,0)
EDUC				
3				307
				(3,0)
+1st Year Advanced ROTC .....				
<b>SENIOR YEAR</b>				
Senior Seminar in Health, Exercise, Sport Science and Physical Education.....	PHED	421	1	(1,0)
Internship in Teaching.....	PHED	499	12	
+2nd Year Advanced ROTC				

NOTE: Admission to student teaching is contingent upon the following:

1. All required course work completed with a GPA of at least a 2.75 (with the exception of PHED 499).
2. Completed the following professional education courses with a cumulative GPR of a 2.75 or higher: EDUC 202, 206, 301, 306, 307, 312; EXSC 200, 305, 314, 319, 329; PHED 101, 201, 335, 350, 404, 407, 433, 460; HLED 407.
3. Passing scores on PRAXIS II (5095) on file at The Citadel prior to student teaching.
4. Passing scores on PLT must be on file in order to graduate.

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**PHYSICS MAJOR  
First Semester**

## FRESHMAN YEAR

+Introduction to Physics .....	PHYS	101	3	(3,0)
Analytic Geometry and Calculus I.....	MATH	131	4	(4,0)
Composition and Literature I.....	ENGL	101	3	(3,0)
A Modern Language .....			3	(3,0)
History of Western or World Civilization I....	HIST		3	(3,0)
++1st Year Basic ROTC.....				
Required Physical Education .....	RPED	250	2	(2,0)
First Year Seminar.....	LDRS	101	1	(2,0)

## SOPHOMORE YEAR

Physics with Calculus II.....	PHYS	222	3	(3,0)
Applications of Physics with Calculus II.....	PHYS	232	1	(1,0)
Laboratory for Physics with Calculus II.....	PHYS	272	1	(0,2)
Analytic Geometry and Calculus III.....	MATH	231	4	(4,0)
Major British Writers I.....	ENGL	201	3	(3,0)
A Modern Language .....			3	(3,0)
+++Approved Elective.....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
++2nd Year Basic ROTC .....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

## JUNIOR YEAR

Analytical Mechanics I .....	PHYS	315	3	(3,0)
Quantum Mechanics I.....	PHYS	405	3	(3,0)
General Chemistry I.....	CHEM	151	3	(3,0)
General Chemistry I Laboratory .....	CHEM	161	1	(0,2)
Mathematical Physics .....	PHYS	320	3	(3,0)
++++Applied Mathematics II .....	MATH	335	3	(3,0)
++1st Year Advanced ROTC .....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

## SENIOR YEAR

Electrodynamics I .....	PHYS	403	3	(3,0)
Advanced Physics Laboratory .....	PHYS	451	2	(0,4)
Research Participation .....	PHYS	420	3	(1,4)
Social Science Core Course.....			3	(3,0)
+++++Approved Elective .....			3	(3,0)
++2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

+Alternate course upon the approval of department head.  
 ++ROTC hours may vary each semester by military department; however the total hours which may be applied toward graduation requirements may not exceed 16 semester hours  
 +++(BIOL 101/111, BIOL 102/112, PHYS 241, PHYS 243, ASTR 201, ASTR 202, CSCI 205 or alternate courses upon the approval of department head)  
 ++++Alternate 300/400 PHYS or MATH course upon the approval of department head.  
 +++++(CHEM 300, PHYS 301, CHEM 305, BIOL 310, PHYS 341, MATH 343, PHYS 409, ASTR 412, PHYS 415, PHYS 416, MATH 422, or alternate course upon the approval of department head) Approved Elective can be taken in the fall or spring term.

**PHYSICS MAJOR  
Second Semester**

## FRESHMAN YEAR

Physics with Calculus I.....	PHYS	221	3	(3,0)
Applications of Physics with Calculus I.....	PHYS	231	1	(1,0)
Laboratory for Physics with Calculus I.....	PHYS	271	1	(0,2)
Analytic Geometry and Calculus II .....	MATH	132	4	(4,0)
Composition and Literature II.....	ENGL	102	3	(3,0)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED	251	2	(2,0)
++1st Year Basic ROTC.....				
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)

## SOPHOMORE YEAR

Modern Physics.....	PHYS	223	3	(3,0)
Applications of Modern Physics.....	PHYS	233	1	(1,0)
Modern Physics Laboratory .....	PHYS	273	1	(0,2)
Electronic Instrumentation.....	PHYS	307	3	(3,0)
Electronic Instrumentation Laboratory .....	PHYS	357	1	(0,2)
Applied Mathematics I.....	MATH	234	4	(4,0)
English, American or World Literature.....	ENGL**		3	(3,0)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
++2nd Year Basic ROTC .....				

## JUNIOR YEAR

Optics .....	PHYS	308	3	(3,0)
Optics Laboratory .....	PHYS	358	1	(0,2)
General Chemistry II.....	CHEM	152	3	(3,0)
General Chemistry II Laboratory.....	CHEM	162	1	(0,2)
Research Planning.....	PHYS	319	2	(1,2)
History of Western or World Civilization II...	HIST		3	(3,0)
Thermodynamics.....	PHYS	410	3	(3,0)
++1st Year Advanced ROTC .....				

## SENIOR YEAR

Electrodynamics II.....	PHYS	404	3	(3,0)
Quantum Mechanics II.....	PHYS	406	3	(3,0)
Analytical Mechanics II.....	PHYS	316	3	(3,0)
Research Presentation .....	PHYS	421	2	(1,2)
Elective .....			3	(3,0)
++2nd Year Advanced ROTC .....				

\*Represents semester credit, lecture, and lab hours, in that order.

\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 130 plus the credit hours from the successful completion of RPED 250, RPED 251, and all ROTC requirements.

**POLITICAL SCIENCE MAJOR****Subfield A—American Government and Politics****First Semester****FRESHMAN YEAR**

Introduction to Political Science.....	PSCI	101	3	(3,0)*
Composition and Literature .....	ENGL	101	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED	250	2	(2,0)
+1st Year Basic ROTC .....				
First Year Seminar.....	LDRS	101	1	(2,0)

**SOPHOMORE YEAR**

International Politics .....	PSCI	231	3	(3,0)
Major British Writers .....	ENGL	201	3	(3,0)
Elementary Mathematical Modeling.....	MATH	104**	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

**JUNIOR YEAR**

Political Parties .....	PSCI	301	3	(3,0)
++Subfield Elective.....	PSCI		3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History Elective .....	HIST		3	(3,0)
Principles of Macroeconomics.....	BADM	201	3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Constitutional Law: Civil Rights .....	PSCI	462	3	(3,0)
Political Issues and Public Policy .....	PSCI	401	3	(3,0)
++Subfield Elective.....	PSCI		3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

++Majors must concentrate in one of three subfields: American Government and Politics, International Politics and Military Affairs, or Law and Legal Studies.

**POLITICAL SCIENCE MAJOR****Subfield A—American Government and Politics****Second Semester****FRESHMAN YEAR**

American National Government .....	PSCI	102	3	(3,0)
Composition and Literature .....	ENGL	102	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Finite Mathematics.....	MATH	105**	3	(3,0)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED	251	2	(2,0)
+1st Year Basic ROTC .....				
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)

**SOPHOMORE YEAR**

Comparative Politics.....	PSCI	232	3	(3,0)
English, American or World Literature.....	ENGL***		3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC .....				

**JUNIOR YEAR**

American Political Thought or.....	PSCI	304, or	3	(3,0)
Ancient/Medieval Political Theory or.....		391, or		
Modern Political Theory or.....		392, or		
Topics in Political Philosophy and Theory		492		
Urban Politics or .....	PSCI	302 or	3	(3,0)
Legislative Process.....		306		
Biology, Chemistry, or Physics .....			4	(3,2)
History Elective .....	HIST		3	(3,0)
General Elective.....			3	(3,0)
+1st Year Advanced ROTC.....				

**SENIOR YEAR**

Political Science Elective.....	PSCI		3	(3,0)
++Subfield Elective.....	PSCI		3	(3,0)
+++Elective.....			3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
+2nd Year Advanced ROTC .....				

+++Non-PSCI Humanities/Social Science upper level course.

\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**POLITICAL SCIENCE MAJOR****Subfield B—International Politics and Military Affairs****First Semester****FRESHMAN YEAR**

Introduction to Political Science.....	PSCI	101	3	(3,0)*
Composition and Literature .....	ENGL	101	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED	250	2	(2,0)
+1st Year Basic ROTC .....				
First Year Seminar.....	LDRS	101	1	(2,0)

**SOPHOMORE YEAR**

International Politics .....	PSCI	231	3	(3,0)
Major British Writers .....	ENGL	201	3	(3,0)
Elementary Mathematical Modeling.....	MATH	104**	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

**JUNIOR YEAR**

International Political Economy .....	PSCI	351	3	(3,0)
American Politics Elective.....	PSCI		3	(3,0)
++Subfield Elective.....	PSCI		3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History Elective .....	HIST		3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Constitutional Law: Civil Rights .....	PSCI	462	3	(3,0)
American Foreign Relations .....	PSCI	431	3	(3,0)
American Politics Elective.....	PSCI		3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

++Majors must concentrate in one of three subfields: American Government and Politics, International Politics and Military Affairs, or Law and Legal Studies.

**POLITICAL SCIENCE MAJOR****Subfield B—International Politics and Military Affairs****Second Semester****FRESHMAN YEAR**

American National Government.....	PSCI	102	3	(3,0)
Composition and Literature .....	ENGL	102	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Finite Mathematics.....	MATH	105**	3	(3,0)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED	251	2	(2,0)
+1st Year Basic ROTC .....				
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)

**SOPHOMORE YEAR**

Comparative Politics.....	PSCI	232	3	(3,0)
English, American or World Literature.....	ENGL***		3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC .....				

**JUNIOR YEAR**

American Political Thought or.....	PSCI	304 or	3	(3,0)
Ancient/Medieval Political Theory or.....		391, or		
Modern Political Theory or.....		392, or		
Topics in Political Philosophy and Theory		492		
National Security Policy .....	PSCI	332	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History Elective .....	HIST		3	(3,0)
General Elective.....			3	(3,0)
+1st Year Advanced ROTC.....				

**SENIOR YEAR**

++Subfield Elective.....	PSCI		3	(3,0)
++Subfield Elective.....	PSCI		3	(3,0)
+++Elective.....			3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
+2nd Year Advanced ROTC .....				

+++Non-PSCI Humanities/Social Science upper level course.

\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

**POLITICAL SCIENCE MAJOR**  
**Subfield C—Pre-Law and Legal Studies**  
**First Semester**

<b>FRESHMAN YEAR</b>				
Introduction to Political Science.....	PSCI	101	3	(3,0)*
Composition and Literature .....	ENGL	101	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED	250	2	(2,0)
+1st Year Basic ROTC .....				
First Year Seminar.....	LDRS	101	1	(2,0)
<b>SOPHOMORE YEAR</b>				
International Politics .....	PSCI	231	3	(3,0)
Major British Writers .....	ENGL	201	3	(3,0)
Elementary Mathematical Modeling.....	MATH	104**	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)
<b>JUNIOR YEAR</b>				
Criminal Justice .....	CRMJ	201	3	(3,0)
American Politics Elective.....	PSCI		3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History Elective .....	HIST		3	(3,0)
Principles of Macroeconomics.....	BADM	201	3	(3,0)
+1st Year Advanced ROTC .....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)
<b>SENIOR YEAR</b>				
Constitutional Law: Civil Rights .....	PSCI	462	3	(3,0)
++Subfield Elective.....			3	(3,0)
American Politics Elective.....	PSCI		3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

++Majors must concentrate in one of three subfields: American Government and Politics, International Politics and Military Affairs, or Law and Legal Studies.

**POLITICAL SCIENCE MAJOR**  
**Subfield C—Pre-Law and Legal Studies**  
**Second Semester**

<b>FRESHMAN YEAR</b>				
American National Government .....	PSCI	102	3	(3,0)
Composition and Literature .....	ENGL	102	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Finite Mathematics.....	MATH	105**	3	(3,0)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED	251	2	(2,0)
+1st Year Basic ROTC .....				
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)
<b>SOPHOMORE YEAR</b>				
Comparative Politics.....	PSCI	232	3	(3,0)
English, American or World Literature.....	ENGL***		3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC .....				
<b>JUNIOR YEAR</b>				
American Political Thought or.....	PSCI	304 or	3	(3,0)
Ancient/Medieval Political Theory or.....		391, or		
Modern Political Theory or.....		392, or		
Topics in Political Philosophy and Theory		492		
Law and Legal Process .....	PSCI	361	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History Elective .....	HIST		3	(3,0)
General Elective.....			3	(3,0)
+1st Year Advanced ROTC.....				
<b>SENIOR YEAR</b>				
Constitutional Law: Powers of Government..	PSCI	461	3	(3,0)
++Subfield Elective.....	PSCI		3	(3,0)
+++Elective.....			3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
+2nd Year Advanced ROTC .....				

+++Non-PSCI Humanities/Social Science upper level course.

\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.



**PSYCHOLOGY MAJOR****First Semester****FRESHMAN YEAR**

Composition and Literature .....	ENGL	101	3	(3,0)*
Biology, Chemistry, or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
General Psychology .....	PSYC	201	3	(3,0)
Required Physical Education .....	RPED	250	2	(2,0)
+1st Year Basic ROTC .....				
First Year Seminar.....	LDRS	101	1	(2,0)

**SOPHOMORE YEAR**

Major British Writers .....	ENGL	201	3	(3,0)
Elementary Mathematical Modeling.....	MATH	104***	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History of Western or World Civilization .....	HIST		3	(3,0)
A Modern Language .....			3	(3,0)
Research Design in Psychology.....	PSYC	203	3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				
Sophomore Seminar.....	LDRS	201/	1	(1,0)
(211 may be taken either semester).....	LDRS	211	0	(0,1)

**JUNIOR YEAR**

Cluster A Elective .....	PSYC		3	(3,0)
Cluster B Elective .....	PSYC		3	(3,0)
**Humanities/Social Sciences Elective.....			3	(3,0)
Professional Development in Psychology .....	PSYC	310	3	(3,0)
General Elective.....			3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

General Elective or PSYC Elective++.....			3	(3,0)
Approved Elective .....	FNAR		3	(3,0)
Contemporary Issues in Psychology.....	PSYC	410	3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
+1st Year Advanced ROTC .....				
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*This requirement will be fulfilled by taking any course in the School of Humanities and Social Sciences, at the 200-level or above, outside of the student's major or minor.

\*\*\*See page 114 for more choices.

+ROTC hours (credit, lecture, and/or lab) may vary each semester by military department; however, the total hours which may be applied toward graduation requirements may not exceed 16 semester hours.

++PSYC elective may be taken either in the fall or spring semester. Students will take a general elective course in the semester in which it is not taken. PSYC elective can be: 1) Cluster A or B course that has not been taken to meet the Cluster A and B requirements, or 2) any PSYC 463 Special Topics course.

**PSYCHOLOGY MAJOR****Second Semester****FRESHMAN YEAR**

Composition and Literature .....	ENGL	102	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
A Modern Language .....			3	(3,0)
Developmental Psychology .....	PSYC	202	3	(3,0)
+1st Year Basic ROTC .....				
Required Physical Education .....	RPED	251	2	(2,0)
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)

**SOPHOMORE YEAR**

English, American or World Literature.....	ENGL****		3	(3,0)
Finite Mathematics.....	MATH	105***	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
History of Western or World Civilization .....	HIST		3	(3,0)
A Modern Language .....			3	(3,0)
Experimental Psychology .....	PSYC	303	4	(3,2)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

**JUNIOR YEAR**

Cluster A Elective .....	PSYC		3	(3,0)
Social Science Core Course.....			3	(3,0)
Cluster B Elective .....	PSYC		3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
+1st Year Advanced ROTC.....				

**SENIOR YEAR**

History and Systems of Psychology .....	PSYC	405	3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
General Elective.....			3	(3,0)
General Elective or PSYC Elective++.....			3	(3,0)
+2nd Year Advanced ROTC .....				

\*\*\*\*ENGL 202, 215, 218, or 219

HOURS REQUIRED FOR GRADUATION: 128 plus the credit hours from successful completion of RPED 250, RPED 251, and all ROTC requirements.

# TOMMY AND VICTORIA BAKER SCHOOL OF BUSINESS

**Col. Michael R. Weeks, Dean**

**Lt. Col. Iordanis Karagiannidis, Associate Dean**

**Col. Michael M. Barth, Associate Dean**

## Tommy and Victoria Baker School of Business

Dean, Jolley Chair: Weeks

Associate Deans: Karagiannidis, Barth

Professors: Bebensee, Bolt, Ebeling, Green, Sobel, Trumbull

Associate Professors: Arnold, Barth, Betterton, Dean, Jones, Karagiannidis, Lim, Lovvorn, Money, Morris, Passyn, Ponomarov, Riggle, Sigler, Shepherd, Smith, Woolsey

Assistant Professors: Bezjian, Park

The mission of the Tommy and Victoria Baker School of Business is to educate and develop innovative leaders of principle to serve a global community.

Our teaching, professional, and personal activities are based on our commitment to these values: integrity, fairness, and concern for others in all of our relationships; continuous pursuit and dissemination of knowledge to promote enlightened changes in society, and continuous improvement in all we do.

Entering freshman cadets may declare their major to be Business or Accounting. In addition, students from within The Citadel who are pursuing other majors may change to Business. In order to continue as Business or Accounting majors, students must achieve a grade of C or better in each of the following five courses that provide the foundation for the major:

BADM 202	Principles of Microeconomics
BADM 205	Business Statistics
BADM 211	Introduction to Financial Accounting and Reporting
BADM 212	Introduction to Managerial Accounting
COMM/BADM 216	Communications in Business

For students interested in accounting careers, the School offers an accounting major. Students who choose to pursue this option use all of their departmental elective slots to satisfy accounting requirements as specified in the “Courses of Study” section of this catalog.

For students with specific career interests, the School offers specializations, known as “Pathways”, that feature specific course work, supplemental educational opportunities, and career planning that allow Pathways students to build expertise and develop marketable career skills in their chosen area.

Under the guidance of a faculty member whose expertise lies in that Pathway, the student and the Pathway director plan a course of study designed to meet the student's individualized career goals. The School currently offers Pathways in supply chain management, financial services, economics, professional selling, and principled management/entrepreneurship. For more information, consult the Baker School of Business website.

**Minor in Business  
(Please refer to p. 125)**

**Business Course Descriptions**

BADM 101 *Introduction to Business* Three Credit Hours

A survey course that acquaints students with the fundamental concepts of business operations, familiarizes them with spreadsheets and the application of spreadsheets to common business problems, introduces common accounting reports used in managing businesses, and presents an overview of career opportunities that exist in business today.

BADM 110 *Computer Applications in Business* Three Credit Hours  
Required of business majors.

The application of computer software to assist in analyzing common business decisions, with an emphasis on advanced techniques in spreadsheet and database development and design. Includes a major business project utilizing presentation software and the Internet.

BADM 201 *Principles of Macroeconomics* Three Credit Hours  
Prerequisite: MATH 104 or MATH 105  
Required of business majors.

A study of the origins of capitalism and the development of economic institutions; an introduction to economic principles, including an analysis of the determination of national income and its fluctuations, and an introduction to money, banking, and government finance. (May be taken after BADM 202.)

BADM 202 *Principles of Microeconomics* Three Credit Hours  
Prerequisite: MATH 104 or MATH 105  
Required of business majors.

A study of value and price, including factors affecting short- and long-run adjustments of the individual firm with respect to prices, costs, and levels of production; value and price determination; market adjustments in competition and monopoly; distribution of income; international economics; and current economic problems. (May be taken before BADM 201.)

BADM 205 *Business Statistics I* Three Credit Hours

Prerequisite: MATH 104 or MATH 105

Required of business majors.

This course introduces the student to the concepts and techniques necessary to organize and analyze data. Topics covered in this course include data collection and presentation, probability distributions, sampling theory, hypothesis testing, analysis of variance, and simple regression analysis. Students will be introduced to computer-based tools used in the analysis of statistical data.

BADM 206 *Applied Business Statistics* Three Credit Hours

Prerequisite: STAT 160

Required of business majors.

A continuation of STAT 160, including an introduction to t, Poisson, and Chi-square distributions; tests of significance; regression and correlation analysis; index numbers; and simple and multiple correlation, as well as a more sophisticated exploration of sampling and probability theory. Students will be introduced to computer-based tools for statistical analysis of data.

BADM 211 *Introduction to Financial Accounting and Reporting* Three Credit Hours

Required of business majors.

Part one in a two-part series on introductory accounting concepts. This course provides an introduction to the basic theory and practice of financial accounting and reporting in an ethical environment. The course focuses on the fundamental concepts, terminology, and techniques for the preparation and interpretation of the corporate financial statements: the balance sheet, the income statement, and the statement of retained earnings.

BADM 212 *Introduction to Managerial Accounting* Three Credit Hours

Prerequisite: BADM 211

Required of business majors.

Part two of a two-part series on introductory accounting. This course focuses on the interpretation and use of accounting information for external and internal decision-making. Topics include preparation and interpretation of the statement of cash flows; financial statement analysis; an integrative annual report project involving the study and interpretation of the corporate annual report; ethics; and the fundamental concepts, terminology, and techniques necessary for the development and use of reports for internal purposes such as cost analysis, budgeting, and decision analysis.

BADM 216 *Communications in Business* Three Credit Hours  
Prerequisite: ENGL 102

Required of students seeking a degree in the Baker School of Business.

A study of written and oral communication in organizations. Emphasis is given to communication theory including communication flows and barriers, as well as the psychology of communicating good, neutral, negative, and persuasive messages. The course also covers career planning, delivering professional presentations, electronic communications, and writing formal reports. This course is the same as COMM 216.

BADM 300 *Intermediate Financial Accounting I* Three Credit Hours  
Prerequisite: BADM 212 with a grade of "C" or higher

Required of accounting majors.

This course includes a rigorous study of the theory and practice of financial accounting. It focuses on the concepts underlying financial accounting, the preparation of corporate financial statements utilizing generally accepted accounting principles, and accounting ethics. Emphasis is on cash, receivables, inventories, non-current and other assets, current liabilities, and the time value of money.

BADM 301 *Intermediate Financial Accounting II* Three Credit Hours  
Prerequisite: BADM 300

Required of accounting majors.

This course is a continuation of BADM 300's rigorous study of financial accounting and the preparation of corporate financial statements. Primary emphasis is on non-current liabilities, equity, investments, and revenue accounting. Other topics include the accounting for taxes, pensions, and leases, as well as current accounting topics and ethics.

BADM 302 *Managerial Accounting* Three Credit Hours  
Prerequisite: BADM 212

Required of accounting majors.

This course is a rigorous study of how organizations accumulate and communicate costs internally. It provides detailed accounting techniques necessary for the development and use of reports for internal purposes and how this information is used for decision-making, planning, and control for all types of business organizations (service, retail, etc.) with a primary emphasis on manufacturing organizations.

BADM 305 *Legal & Ethical Environment of Business* Three Credit Hours  
Required of business majors.

An introduction to the legal system, with special emphasis on its relation to business. Students will contend with federal and state regulations as well as the common law to arrive at an understanding of the legality, ethics, and social responsibility of business decisions. Topics include an introduction to

the judicial system, torts and product liability, administrative law and consumer protection, agency and partnership, contracts, the Constitution, criminal law, ethics, and fiduciary trust.

BADM 309 *Marketing Principles* Three Credit Hours  
Prerequisite: BADM 202

Required of business majors.

Introduction to basic concepts and terminology in marketing: the process of developing marketing strategy, the role of marketing activities within the firm, external influences that affect the development of marketing strategy, and basic analytical tools appropriate to marketing decision-making. International and ethical issues in marketing are examined.

BADM 310 *Operations Management* Three Credit Hours  
Prerequisites: BADM 205 or STAT 160, BADM 202, and BADM 212

Required of business majors.

Operations management focuses on the systematic direction of the processes involved in the sourcing, production, and delivery of products and services. This course addresses managerial issues such as facility location and layout, service design, demand forecasting, production scheduling, project management, quality management (for example, lean, JIT, Six Sigma, TQM, etc.), inventory management, supply chain management, maintenance and reliability, and capacity management. Included are applications of decision models, statistical methods, or optimization techniques such as linear programming, queueing theory, simulation, or others.

BADM 318 *Commercial Law* Three Credit Hours  
Prerequisite: BADM 305, junior standing

Required of accounting majors.

This course provides an overview of contracts and business law relating to the commercial and financial transactions of persons and organizations regularly engaged in business, both within the U.S. and globally. The course principally focuses on key articles of the Uniform Commercial Code (UCC), including provisions relating to sales, commercial paper, and secured transactions, in commercial transactions. In relation to those topics, the course also addresses the roles of arbitration and litigation, agency regulation, CPA Professional Responsibilities and bankruptcy law. This course serves as a companion to BADM 305, which examines law and ethics in a broader business and organizational context.

BADM 320 *International Business* Three Credit Hours

This course focuses on decisions in international business operations for small and large firms. Of particular interest are international business climate/culture, foreign exchange rates, international trade, overseas direct investment, and operations management. Students will incorporate case studies dealing with aspects of international business.

BADM 321 *Business Finance* Three Credit Hours

Prerequisite: BADM 212

Required of business majors.

An introductory course combining both a description of the structure of business financing and a study of financial principles and practices, with special emphasis on their relation to managerial planning and control.

BADM 322 *Intermediate Finance* Three Credit Hours

Prerequisite: BADM 321

This course considers problems arising in the financial management of operations of nonfinancial firms. Emphasis is on the role of the finance executive in a business. The course builds on the tools and concepts introduced in BADM 321 Business Finance.

BADM 323 *Quality Management* Three Credit Hours

Prerequisite: BADM 205, STAT 160 or equivalent

Students will develop an overall framework within which they can understand quality as a system. Content includes a look at the impact of the quality movement on our world during recent decades for both manufacturing and service organizations. The course focuses on management, leadership, organization, and tools needed to build and continuously improve quality and customer value throughout the supply chain. Included is a review of the contributions of those who are considered prime movers in the quality revolution, including Deming, Crosby, Juran, and Taguchi; a survey of current developments in the field; and practice in use of typical Quality Management techniques, tools, and processes including Lean, Six-Sigma, SPC, ISO 9000, business process improvement, QFD, and others.

BADM 324 *Purchasing and Materials Management* Three Credit Hours

Prerequisite: BADM 205, STAT 160 or equivalent

The course introduces students to the critical role of purchasing in the supply chain. Topics may include the evolution of supply management and its strategic nature in world-class organizations; the supply manager's responsibilities; the "boundary-spanning" nature of supply management; the purchasing process, objectives and responsibilities; supplier evaluation and selection; supplier quality and risk management; negotiation framework and planning; cost concepts (e.g., direct and indirect costs, fixed, step, and variable costs, and target costs) and cost analyses; "Make or Buy" decisions; developing in-country sources of supply versus "offshoring" decisions; ethical and professional standards expected among supply management professionals; and environmental considerations in purchasing and materials management.

BADM 326 *Principles of Real Estate* Three Credit Hours

The course provides a personal and professional perspective of the legal, financial, and ethical rights and obligations of all parties in a real estate transaction. Topics include organizing, functioning, financing, marketing, brokering, appraising, and managing of real estate transactions.

BADM 327 *Principled Entrepreneurship and the Free Enterprise System* Three Credit Hours

Prerequisites: C or better in BADM 201, 202, 205, 211, 212, (or COMM) 216

This course explores the role of entrepreneurship in the free enterprise system, how government policies affect entrepreneurial activity within the United States and globally, and the moral and ethical dimensions of principled entrepreneurship. It focuses on using the tools of economics to understand the entrepreneurial process, including the role of profits and losses, discovery, and creative destruction. It examines the legal forms of business organization and the challenges involved in opening a business and writing a business plan.

BADM 329 *Project Management* Three Credit Hours

Prerequisite: BADM 205 or STAT 160 or equivalent

This course is designed for students who have taken courses in management and organizational behavior, introductory finance, and statistics. Students without these courses are likely to have to devote more time to topics briefly reviewed and may have to supplement their learning on their own for some topics.

This course introduces students to the concepts and tools currently being used in the professional field of Project Management. Students will obtain a basic understanding of project management principles and practices, increase their ability to function effectively on a project team and as a project manager, and improve their ability to communicate effectively both orally and in writing. The course includes coverage of management in a wide range of project applications from concept through operations. Planning, scheduling, controlling, economic analysis, quality, and customer satisfaction are stressed. The topics in this course cover essential concepts from the Project Management Institute's *A Guide to the Project Management Body of Knowledge* (PMBOK).

BADM 331 *Financial Modeling* Three Credit Hours

Prerequisite or corequisite: BADM 321

This is a hands-on course in financial modeling, primarily using Microsoft Excel. The topics covered follow those in financial management and investment courses. The emphasis will be on the practical application of financial theory.

BADM 332 *Financial Markets and Institutions* Three Credit Hours

Prerequisite: Sophomore standing

This course provides an overview of the key financial institutions (banks, insurance companies, mutual funds, government entities, etc.), markets (stock, bond and foreign exchange among others) and the wide array of financial instruments that are available to businesses and individuals. Particular attention

will be paid to risk management and how the various markets and institutions interact with each other. Activities that take place in financial markets and institutions have a direct effect on personal wealth, the behavior of consumers and businesses, and the well-being of the overall economy.

BADM 338 *Management and Organizational Behavior* Three Credit Hours

Required of business majors.

A study of the fundamental concepts of management and organizational behavior. Emphasis is placed on the study of human behavior, attitudes, and performance in organizations, and on the development of positive interpersonal relations. A major focus is on the managerial roles of leader and decision-maker necessary for effective planning, organizing, influencing, and control of the organization. The dynamics and links among individuals, groups, and the national and international environment are analyzed to highlight the determinants of organizational effectiveness.

BADM 371 *Leadership in Organizations* Three Credit Hours

Prerequisites: Junior standing

Using a case approach as well as a significant experiential component, this course involves the application of leadership theory and practice covered in this class and in other classes in the interdisciplinary minor in Leadership Studies. The course draws from cases in business and other organizations to focus the student's learning in both individual and team projects. Issues of motivation, persuasion, ethics, power, diversity, teams, etc. will all be explored. Guest speakers/leaders will also be an important component of the course.

BADM 402 *Advanced Accounting* Three Credit Hours

Prerequisite: BADM 300

Prerequisite or corequisite: BADM 301

Required of accounting majors.

This course focuses on accounting and reporting issues in specialized organizations such as consolidated entities, governmental bodies, and not-for-profit organizations. Topics include the specific accounting rules and techniques that apply within each of these areas.

BADM 404 *Investments* Three Credit Hours

Prerequisite: BADM 321

A survey course that introduces different types of securities, markets, transaction costs, security regulations, and taxes. The basic techniques for analyzing the potential returns and risks of individual securities and for combining them efficiently into portfolios are also studied.

BADM 405 *Marketing Management* Three Credit Hours

Prerequisite: BADM 309

A study of marketing planning and decision-making from the point of view of the marketing manager in a changing economic, social, and legal environ-

ment. Basic concepts and methods of analysis used in formulating product, distribution, promotion, and pricing strategy are studied.

BADM 406 *Professional Selling* Three Credit Hours

Prerequisite or corequisite: BADM 309

A study of the stages of the professional selling process, and the role of sales in today's marketing environment. Emphasis on learning adaptive selling techniques and developing effective interpersonal communications skills. Sales careers are examined.

BADM 407 *Money and Banking* Three Credit Hours

Prerequisite: BADM 201

The nature and functions of money, the various monetary standards, the development of our monetary system, the factors affecting the value of money, methods and objectives of money and credit control, international exchange, and analysis of recent developments in money and credit.

BADM 408 *Advanced Professional Selling* Three Credit Hours

Prerequisite: BADM 309 and BADM 406

A continuation of the study of the professional selling process, and the role of sales in today's marketing environment. Emphasis will be placed on further learning adaptive selling techniques and developing effective interpersonal communication skills. National and regional sales competitions will be discussed and possibly attended depending on the semester

BADM 409 *Human Resource Management* Three Credit Hours

Prerequisite: BADM 338

A contemporary course in the management of personnel as a resource concentrating on the historical, legal, social, economic, and ethical framework of labor relations with a focus on forecasting, planning, staffing, compensating, developing a career, labor relations, performance management, and control and evaluation of human resources.

BADM 412 *Business Ethics* Three Credit Hours

This management course provides an overview of principles and dynamics integral to building and leading ethical organizations. The course examines the positive contributions of ethical business enterprise, and offers practical tools for recognizing and meeting ethical challenges encountered by for-profit and not-for-profit organizations. Applying a "triple bottom line" analysis, this course shows how organizations can simultaneously pursue financial transparency and accountability, encourage sustainable stewardship of human capital and environmental resources, and promote responsibility for operational and social impact on stakeholders and communities. Case studies illustrate the key

roles people play in developing ethical cultures and decision-making, engaging in principled leadership at all organizational levels, and ensuring effective oversight and governance.

BADM 413 *International Marketing* Three Credit Hours  
Prerequisite: BADM 309

Introduction to global problems, cultural and ethical issues, and decision areas facing the marketing manager. Primary emphasis rests on the value of cross-cultural understanding and the need for careful adaptation of marketing efforts.

BADM 414 *Consumer Behavior* Three Credit Hours  
Prerequisite: BADM 309

The study of behavioral science theories and related marketing models useful to managers in understanding consumers in the domestic and global marketplaces.

BADM 415 *Relationship Marketing* Three Credit Hours  
Prerequisite or corequisite: BADM 309

This course helps students understand and develop the basic persuasive skills which are important to people in all walks of life. Assignments are designed to help students improve their skills in communicating effectively, establishing relationships, solving problems, and leading and persuading others.

BADM 416 *Auditing and Assurance Services* Three Credit Hours  
Prerequisite: BADM 300

Prerequisite or corequisite: BADM 427

Required of accounting majors.

The study of the basic concepts of auditing including ethics, risk analysis, evaluation of controls, evidence-gathering, the effects of Sarbanes-Oxley, and reporting as applicable to financial statement, compliance, and operational audits. Professional auditing standards will be utilized throughout the course.

BADM 417 *Management Information Systems* Three Credit Hours  
Prerequisite: BADM 110

Information systems (IS) support the overall strategy of an organization in many ways. This course reviews the issues associated with managing and improving the IS function within an organization, including using IS to support decision making, manage the firm's assets, and develop and support customers. Additional topics include the critical role of IS in an organization's strategic plan, security issues, and the harnessing of technological advances for organizational growth.

BADM 419 *Federal Taxation* Three Credit Hours

Prerequisite: BADM 212 with a grade of "C" or higher

Required of accounting majors. Open to all business majors.

This course provides a study of the basic principles of federal income tax law applicable to individuals and sole proprietors. Emphasis is given to research, compliance, and tax planning. Topics include an understanding of tax legislation as well as discussions on inclusions, deductions, exclusions, credits, gift and estate tax, and property transactions, with a limited emphasis on other tax entities.

BADM 420 *Management of Change* Three Credit Hours  
Prerequisite: BADM 338

This course uses knowledge and skills from the social sciences to develop strategies for achieving effective change within organizations. Implementation of these strategies to achieve more effective organizations is the core of this course. Topics include team building, process consultation, confrontation and the management of conflict, and technostructural change.

BADM 421 *Logistics Management* Three Credit Hours

Prerequisite: BADM 205 or STAT 160 or equivalent and BADM 429

Logistics is that part of supply chain management that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services, and related information between the point of origin and point of consumption in order to meet customers' requirements (Council of Supply Chain Management Professionals, 2003). The course covers the role and importance of the key logistics intermediaries that facilitate global trade. It describes the functions comprising logistics, describes how these functions interact, and explains how logistics can be managed as a system to reduce total cost.

BADM 422 *Strategic Management* Three Credit Hours

Prerequisites: BADM 201, BADM 202, BADM 212, BADM 309, BADM 321, BADM 338

Required of business majors.

A capstone course designed to give the student practice in integrating the numerous theory courses in all phases of business management. The student develops problem-solving and decision-making skills by assuming the role of top management in a simulated company and through the study of actual business cases.

BADM 423 *Personal Finance* Three Credit Hours

Prerequisite: Junior standing

Personal Finance focuses on the application of basic financial tools and principles to the student's personal life. Concepts and tools covered include: the financial planning process, liquidity management, debt management, asset management, and risk management. The course will also include retirement, education, and estate planning. Upon successful completion of this course, the student will be prepared to create and manage their own personal financial plan.

BADM 424 *Inclusion & Diversity at Work* Three Credit Hours

Students will learn about leadership and follower knowledge, behaviors, organizational practices, cultures, and policies related to workplace diversity and workplace inclusion at intrapersonal, interpersonal, group, organizational, industry, and societal levels. Using seminar discussion, short lectures, guest speakers, journaling, and a "learning lab" experiential approach, students will explore topics relevant to diversity and inclusion. They will leave the course with knowledge that they can transfer into workgroup effectiveness. The course draws from case studies, texts, articles, and students' experiences. Individual and group work are required.

BADM 425 *Small Business Management/ Entrepreneurship* Three Credit Hours

Prerequisites: Junior or senior standing in business; "C" or higher in BADM 201, BADM 202, BADM 205, BADM 211, BADM 212 and COMM/BADM 216

This course covers the environment of small business, factors of success or failure, small business management tools, and sources of financing. Student teams will prepare business plans for the start-up of a business. In some instances, the teams will work with local entrepreneurs in developing business plans. The course is supported by a multi-media business planning system.

BADM 426 *Risk Management* Three Credit Hours

Prerequisite: BADM 321

Risk Management is a study of the identification, evaluation, financing and control of both financial and non-financial business risk as well as the techniques that are used to manage those risks. Integrated risk management of the entire portfolio of risk in the business enterprise is emphasized throughout the course. Risk Management techniques to include hedging, diversification, and insurance are examined.

BADM 427 *Accounting Information Systems* Three Credit Hours

Prerequisites: "C" or higher in BADM 110, BADM 211, and BADM 212.

Required of accounting majors.

This course reviews the core concepts of accounting information systems that support and enable business processes. The course reviews the accountant's role in designing, developing, implementing, and maintaining an accounting information system. New topics are introduced each semester to reflect technological changes in the marketplace. Students will utilize specialized software to support the accounting functions and be able to evaluate various software packages.

BADM 428 *Technology and Entrepreneurship* Three Credit Hours

Prerequisites: Junior or senior standing in business; "C" or higher in BADM 201, BADM 202, BADM 205, BADM 211, BADM 212 and COMM/BADM 216

Technology ventures are significantly changing the global competitive landscape. This course explores the intersection of technology and entrepreneurship, including both the development of new technology-based businesses and the use of technology in launching and marketing new businesses. Students will learn about models of technological change, models of new firm strategy development, and models of organizational strategy in high-tech start-ups. Topics include: matching new technologies and markets, making money from innovation, competition between technologies, strategies for competing against established incumbents, technology portfolio development, and theories of diffusion and adoption.

BADM 429 *Supply Chain Management* Three Credit Hours

Prerequisite: BADM 205, or STAT 160, or equivalent

This course focuses on basic principles and essential concepts of supply chains and their effective operation and management. Topics may include methods of resource acquisition, contract management, procurement, production, packaging, shipping, warehousing, inventory placement, distribution, transportation, logistics planning, risk, quality, information technology, and product support.

BADM 430-435 *Lecture in Business Administration* Three Credit Hours

Prerequisite: Junior or senior standing in business

These courses are designed to provide students of exceptional ability and background with the opportunity to explore a variety of advanced, business-oriented, analytical techniques. Specified topics covered within these courses will be offered at the discretion of the instructor and under the supervision of the department head.



BADM 450 *Internship* Three Credit Hours

Prerequisite: Junior or senior standing

This course gives junior or senior students real-world work experience to complement the classroom education they have already received. Interns will learn about the variety of issues faced by today's firms and their managers, the kinds of information firms collect and use, and the development of solutions for business problems. Interns will spend ten to twelve hours each week working alongside a senior-level manager in a business.

BADM 490 *Independent Study* Three Credit Hours

Prerequisite: Junior or senior standing with at least a 3.0 academic average. Approvals for enrollment during preregistration from sponsoring professor and department head are required.

This course may be taken by juniors or seniors desiring to engage in a scholarly research project of mutual interest to the student and the faculty member who directs the study. The project should culminate in a formal student research paper.

## ZUCKER FAMILY SCHOOL OF EDUCATION

**Col. Larry G. Daniel, Dean**

**Col. Renée N. Jefferson, Associate Dean**

# Zucker Family School of Education

## PROGRAMS LEADING TO TEACHER CERTIFICATION

Dean of Education & Director of Teacher Education: Daniel

Professors: Cheshire, Daniel, Jefferson, Murray, Williams

Associate Professors: Graham, Hewett, Ilagan, Oberman

Assistant Professors: Albert, Dague, Jocius, Kane

Visiting Assistant Professor: Reilly, Thompson

Instructors: Zhao

The purpose of the Zucker Family School of Education's undergraduate programs is to serve the people of the Lowcountry, the state of South Carolina, the Southeast, and the nation by providing high quality programs in the preparation of secondary teachers (grades 7-12) and K-12 programs in physical education and modern languages (French, German and Spanish). While approximately fifty percent of the undergraduate student body is from the state of South Carolina, students from across the United States are involved in education programs at The Citadel. Reciprocal arrangements with other states and the accreditation/approvals of the Council for the Accreditation of Educator Preparation (CAEP), and the Interstate Teacher Assessment and Support Consortium (InTASC) facilitate certification in all fifty states.

### Statement of Philosophy

The philosophy of the Zucker Family School of Education at The Citadel is based on five fundamental propositions. These propositions serve to orient the mission and conceptual base of the School, guide the actions and value system of the faculty, shape the curricula of the various programs, and provide to its faculty their sense of purpose and meaning for teaching, scholarship, and professional service. These five propositions are:

- (1) The faculty is committed to promoting education for all individuals to the fullest extent possible. With the implementation of appropriate teaching and assessment strategies, a fundamental guiding belief is that all students, though having unique learning styles and experiences, are capable of learning.
- (2) It is the educator's responsibility, with the aid of appropriate resources and support, to establish a mutually respectful environment where ef-

fective learning occurs for all students.

- (3) Education is a systematic effort to facilitate the knowledge, skills, attitudes and values necessary for the student to function in a diverse society.
- (4) The faculty is committed to upholding the highest professional standards in all situations in which they model these standards to students through their teaching, research, and service endeavors.
- (5) The faculty is committed to an open interchange of ideas wherein the perspectives of all are valued.

### The School's Mission

The mission of the Zucker Family School of Education at The Citadel is to support the development and preparation of individuals who are **knowledgeable** about the learning process and learners and who are **effective, ethical, and reflective** educators prepared to assume **leadership** roles in the profession and community. Further, with a focus toward **learner-centered education**, they are effective in educating a diverse learner population to high academic standards. The mission is based on the School's philosophy and conceptual model.

### Conceptual Framework of The Citadel's Professional Education Unit

#### Developing Principled Educational Leaders for P-20 Schools

The Citadel's Professional Education Unit prepares principled educational leaders to be knowledgeable, reflective, and ethical professionals. Candidates completing our programs are committed to ensuring that all students succeed in a learner-centered environment.

The Citadel's Professional Education Unit is committed to the simultaneous transformation of the preparation of educational leaders and of the places where they work. Specifically, The Citadel's Professional Education Unit seeks to develop principled educational leaders who:

- have mastered their subject matter and are skilled in using it to foster student learning;
- know the self who educates (Parker J. Palmer) and integrate this self knowledge with content knowledge, knowledge of students, and in the context of becoming professional change agents committed to using this knowledge and skill to ensure that all students succeed in a learner-centered environment; and
- exemplify the highest ethical standards by modeling respect for all human beings and valuing diversity as an essential component of an effective learner-centered environment.

The Citadel's Professional Educational Unit is committed to high-quality,

evidence-based educator preparation that assures educators are ready to work effectively with all learners. Our vision is to transform our cadets, evening undergraduate students, and graduate students into principled educational leaders prepared to produce learning environments in which all students can be successful. Our initial programs for teacher candidates focus on developing educators prepared for highly diverse learners, including students with disabilities, those from economically disadvantaged communities, and those who are culturally, ethnically, and linguistically diverse. Our advanced programs are focused on preparing professional leadership and service roles in P-20 settings.

The Citadel's Professional Education Unit has identified 15 performance indicators for candidates to demonstrate that they are principled educational leaders who are knowledgeable, reflective, and ethical professionals:

#### **Knowledgeable Principled Educational Leaders...**

1. have mastered the subject matter of their field of professional study and practice;
2. utilize the knowledge gained from developmental and learning theories to establish and implement an educational program that is varied, creative, and nurturing;
3. model instructional and leadership theories of best practice;
4. integrate appropriate technology to enhance learning;
5. demonstrate a commitment to lifelong learning.

#### **Reflective Principled Educational Leaders...**

6. develop and describe their philosophy of education and reflect upon its impact in the teaching and learning environment;
7. develop and manage meaningful educational experiences that address the needs of all learners with respect for their individual and cultural experiences;
8. construct, foster, and maintain a learner-centered environment in which all learners contribute and are actively engaged;
9. apply their understanding of both context and research to plan, structure, facilitate, and monitor effective teaching and learning in the context of continual assessment;
10. reexamine their practice by reflectively and critically asking questions and seeking answers.

#### **Ethical Principled Educational Leaders...**

11. demonstrate commitment to a safe, supportive, learning environment;
12. embrace and adhere to appropriate professional codes of ethics;
13. value diversity and exhibit a caring, fair, and respectful attitude and respect toward all cultures;

14. establish rapport with students, families, colleagues, and communities;
15. meet obligations on time, dress professionally, and use language appropriately.

### **Director of Teacher Education**

The Director of Teacher Education is the college official charged with the responsibility for the development, implementation, administration, and monitoring of all teacher education activities at The Citadel. The director assures that all Citadel programs meet the standards and criteria set forth by:

1. The South Carolina General Assembly
2. The South Carolina Department of Education
3. The Council for Accreditation of Educator Preparation (CAEP)

Teacher education at The Citadel is dedicated to the development of teachers for the public schools of the state and nation. Teacher education programs prepare students to teach in secondary schools (grades 7-12). In addition, a program for K-12 certification is available in physical education (see the Department of Health and Human Performance section for additional information) and in modern languages (see the Department of Modern Languages, Literatures, and Cultures for additional information).

### **Admission to the Major**

Admission to an Education Major at The Citadel is a three-level process. Students should read this section carefully so that this process is well understood.

#### **Assignment to Pre-Education**

Students who are interested in the teaching profession are first assigned to Pre-Education, Pre-Physical Education (Teaching Track), or to biology, chemistry, and modern language majors that include a concentration in teacher education. For those interested in Physical Education (Teaching Track), please refer to the requirements of the Department of Health and Human Performance. At the Pre-Education level, it is the student's responsibility to achieve passing scores—as determined by the South Carolina Department of Education—on the PRAXIS Core Academic Skills for Educators tests. Students should take the PRAXIS core exams during their sophomore year and are responsible for ensuring that official records of passing scores are on file at The Citadel. Also, students—in consultation with their faculty advisors—are responsible for following the appropriate curriculum. In addition, students need to pay attention to their cumulative grade point average (GPA) since a 2.750 cumulative GPA is required for admission into teacher education senior level study.

### Admission to Education Major

To be admitted to the teacher education senior level study or to content majors that include a concentration in teacher education, the student enrolled in pre-education must have the support of his or her advisor relative to suitability and interest in teacher education and must also have:

1. official passing scores on all three parts of PRAXIS core exams on file at The Citadel;
2. maintained a cumulative Grade Point Average of 2.750 or higher on at least 45 credit hours of coursework taken at The Citadel;
3. passed EDUC 101 and EDUC 202.

### Admission to the Internship in Teaching (EDUC 499 or PHED 499)

Students must make a formal application for admission no later than the beginning of the fall semester of their junior year. The internship is not normally offered to students in fall semesters. This application will be reviewed by the Committee on Admissions and Retention and will include, among other things, recommendations from professors in completed professional education and content area courses, recommendations from general education faculty, and an evaluation by the student's advisor regarding the student's suitability and interest in teacher education. In addition, the student must have:

1. completed all professional education courses and content coursework;
2. on file at The Citadel South Carolina State Department of Education clearance through the FBI and SLED;
3. a cumulative GPA of at least 2.750;
4. completed successfully all previous field experiences;
5. on file at The Citadel official records of the appropriate PRAXIS II test score(s). It is strongly recommended that students take the Principles of Learning and Teaching (PLT) test as soon as they have completed EDUC 101, EDUC 202 and EDUC 312.

The Director of Teacher Education will be informed of the results of this review and will send official notice of admission or rejection to the student. In the absence of significant extenuating circumstances, a student not eligible for the Internship in Teaching will be required to change majors.

### Graduation Requirements

To meet graduation requirements, the Teacher Education major must complete all requirements for one of the teaching field courses of study and must have earned a GPA of at least 2.750. In addition, passing scores on the appropriate PRAXIS II and Principles of Learning and Teaching (PLT) exams must be on file at The Citadel.

Completion of the curricular requirements may result in licensure by the South Carolina Department of Education. **A grade of "B" or better in EDUC 499 is necessary to qualify for teacher certification recommendation.**

### The Professional Education Board

To facilitate the college-wide mission of preparing principled leaders for professional education, The Citadel established (effective fall of 2006) the Professional Education Board (PEB). The Citadel PEB's primary focus is to foster academic environments that promote the development of principled leaders for the education profession and to facilitate the continuing improvement of professional education programs across the college. In pursuing these goals, the PEB will concentrate on communication, assessment, and governance issues. The Citadel's Dean of the School of Education chairs the Board, and it is comprised of representatives from all of The Citadel's professional education constituencies, including faculty, staff, students, and our P-12 colleagues. PEB members are appointed by the Dean of the School of Education in collaboration with the Deans of Humanities and Social Sciences and Science and Mathematics. The Professional Education Board meets monthly during each academic year.

### Minor in Education (Please refer to p. 135)

### Education Course Descriptions

EDUC 101     *Education in Modern Society*     Three Credit Hours  
Open to any interested student.

An orientation to teaching as a profession and to the teacher-training program. Study and discussion on school organization and teachers' roles and responsibilities; personal and professional guidance. Introduction to the learner-centered conceptual base of the department.

EART 201     *Introduction to Earth Science*     Four Credit Hours

A study of the materials and major processes of the earth including minerals and rocks, plate tectonics, hydrology, volcanoes, mountain building, oceanography and weather and climate. The geologic history of the earth and the fossil record will also be included. *Emphasis will be on Earth Space content for teaching in middle and secondary schools.*

Lecture: three hours; laboratory: three hours

EDUC 202     *Educational Psychology*     Three Credit Hours

This course focuses on the dynamics of human learning and the psychological principles that serve as the foundation for educational practice. The general goal is to introduce students to the field of educational psychology and to teach them how to apply the concepts, theoretical principles, and research findings from the discipline of psychology to the planning and implementation of effective instructional strategies in the classroom. Major emphasis is placed on assisting the student in gaining a functional knowledge of the ideas explored. Moreover, through this course the college student who is preparing for employment in

the field of education is acquainted with many facets of the teacher's role as a decision maker in the teaching/learning process. Class discussions, activities, and field experience focus on the connections between theory and practice and provide students with opportunities to apply psychological principles and solve practical problems.

EDUC 206 *Adolescent Development* Three Credit Hours

A survey of the basic principles and theories of human development with a focus on adolescents and their educational processes. The field experience is designed to interrelate college classroom learning with public school observations and activities.

EDUC 301 *Foundations in Reading* Three Credit Hours

A foundational course designed to develop competencies in teaching literacy skills. The content of this course examines the theoretical research and historical perspectives as related to reading education. Five components of a balanced literacy program are examined and these components are based on research of the National Reading Panel. Approaches to reading are examined as phonics; sight; linguistic; language experience approach; and the VAKT. Literacy educators and pioneers in reading education as Chall, Flesch, Fries, Allen, and Fernald are discussed to provide background information from a historical perspective to assure that students will have a knowledge of foundations.

EDUC 306 *Teaching Reading and Writing in the Middle and High School* Three Credit Hours

Prerequisites: EDUC 202, EDUC 301, EDUC 401, and Admission to Senior Level Study - GPA at least 2.750, passing PRAXIS Core Exams or equivalent, and acceptable professional dispositions.

Designed to acquaint prospective middle school and high school teachers with reading practices geared to their students. The course will include a broad survey of the field of reading with attention given to some diagnostic procedures and the development of Reading Across the Curriculum programs for the middle school and high school levels. Different subject areas will be considered. Field experience in a public school is among course requirements.

EDUC 307 *Child Development* Three Credit Hours

Acquisition of understanding and appreciation of the mental, physical, social, and emotional aspects of development in childhood. Emphasis on techniques of motivation, principles of learning, learning styles, individual differences, and developmental problems. Field experience is required.

EDUC 312 *Learners with Exceptionalities* Three Credit Hours

Teaching Students with Special Needs is an introductory-level course for education majors and other interested students. The course is designed to prepare

prospective teachers to define and identify characteristics of students with disabilities and students at risk for school failure. Teaching Students with Special Needs is based on the premise that it is the teacher's responsibility to meet the needs of every learner, typical or atypical. A field experience component of ten hours in the school is required.

EDUC 330 *Developing Leadership Skills through Peer Counseling* Three Credit Hours

This course investigates the role, responsibilities, and personal commitments of Peer Counselors (PC) within the Corps of Cadets, the Active Duty and Veteran undergraduate student body at The Citadel. The course is designed for undergraduate students earning a Minor in Leadership Studies, and provides training and experiential activities to develop and reinforce the skills necessary to provide supportive services to fellow students through a peer counseling process.

EDUC 401 *Methods and Materials of Middle and High School Teaching* Three Credit Hours

Study of the aims, methods, and materials employed in middle and high school teaching; organization of subject matter; motivation and direction of learning; development of attitudes, appreciations, and ideals; classroom presentation of formal materials. The utilization of technology and the development and use of evaluative instruments in the total teaching-learning process will be emphasized. Upon completion of this course, students should take the Praxis II content area test.

EDUC 402 *Special Methods in Teaching* Three Credit Hours

Prerequisites: Admission to Senior Level Study  
Special techniques, theories, and materials in teaching in the content area of specialization in middle school (grades 5-8) and high school (grades 7-12).

EDUC 409 *Special Topics in Education* Three Credit Hours

Prerequisite: permission of the instructor and/or department head  
A course designed for the intensive study of a current problem in the field of education at the undergraduate level.

EDUC 420 *Independent Study/Research* Three Credit Hours

Prerequisite: permission of the instructor and/or department head  
This course will offer students an opportunity to acquire a deeper knowledge in the area of specialized interest related to the field of education. Prior to enrollment, each student must submit a plan of study to the department. A formal research paper will be required. Credit in independent study/research is limited to 3 semester hours in a degree program.

EDUC 499 *Internship in Teaching* Twelve Credit Hours

Prerequisites: Refer to requirements for admission to internship.

A requirement for certification, observation and teaching in approved schools under approved supervising teachers, supervision by college instructor. Assignment only in major teaching field. This internship is a minimum of twelve weeks and contains a weekly seminar. All students provide their own transportation. Formal application for admission to the Spring internship in teaching must be made no later than the beginning of the fall semester of the junior year.

# **SCHOOL OF ENGINEERING**

**Col. Ronald W. Welch, Dean**

**Department of Civil and Environmental Engineering  
Col. William J. (Jeff) Davis, Head**

**Department of Electrical and Computer Engineering  
Col. Robert Barsanti, Head**

**Department of Engineering Leadership  
and Program Management  
Lt. Col. Robert Rabb, Head**

**Department of Mechanical Engineering  
Lt. Col. Robert Rabb, Head**

## Department of Civil & Environmental Engineering, and Construction Engineering Program

Department Head and Program Director: Davis  
Professors: Bower, Davis, Mays, Welch  
Associate Professors: Murden, Watson, Woo  
Assistant Professors: Batouli, Brown, Burke, Ghanat, Grayson, Michalaka, Wood

### Department's Mission Statement

The mission of the Department of Civil and Environmental Engineering (CEE) and Construction Engineering (CONE) program is to provide a nationally recognized student-centered learning environment for the development of principled leaders in the civil engineering and construction engineering communities through a broad-based, rigorous curriculum, emphasizing theoretical and practical engineering concepts, strong professional values, and a disciplined work ethic.

The Department of Civil and Environmental Engineering and Construction Engineering Program recognizes that civil engineers and construction engineers are people-serving professionals who manage resources as well as technology. Civil engineers and construction engineers plan, design, construct, and maintain facilities essential to modern life in both the public and private sectors. Accordingly, the Department strives to develop the skills of its engineering students in the management of resources—time, materials, money, and people through effective combination of the academic with military discipline. Consistent with the high aims of the civil engineering and construction engineering professions, the department seeks to ensure its academic program is underpinned by a broad base of ethical knowledge and behavior as well as modern leading-edge technology. The department accomplishes its mission by connecting students, faculty, and staff in a unique academic environment, achieving the intended development of the student through the enriched personal, professional, and educational growth of each individual.

## Goals and Objectives

### Program Educational Objectives

The Civil and Environmental Engineering and Construction Engineering program educational objectives are designated in the following three areas:

*Design:* Graduating students who are successful in engineering based on a course of study focused on design, including a solid theoretical and practical foundation that leads to successful employment in the private and public sectors.

*Sustainable Success:* Graduating students who have sustainable career success and participate in leadership roles through demonstration of lifelong learning, effective communication, contributions on multidisciplinary teams, and broad based perspective of engineering and societal needs.

*Broad Based Education:* Graduating students who have a broad educational background that leads to good citizenship through leadership, management, decision making and problem solving abilities.

### Departmental Core Values

The Department of Civil and Environmental Engineering and Construction Engineering program has adopted the following core values:

Students are our Focus: We believe the education, development, empowerment, and welfare of our students are the primary focus of our efforts.

Civil Engineers and Construction Engineers as Principled Leaders: We believe the engineering profession requires the highest professional and ethical standards, which we seek to model, teach and prepare our students to embrace.

Collaborative Teaching and Learning Environment: We believe a collaborative collegial environment among our faculty, staff and students is critical in sustaining advancement in educational excellence.

Growth through Assessment: We believe data-driven inquiry and improvement will lead us to sustained advancement in educational excellence.

## Civil Engineering Student Outcomes

At the time of graduation from the civil engineering and construction engineering programs, a student should have achieved an acceptable level of skills and knowledge in the following areas:

1. Mathematics
2. Natural Science
3. Mechanics

4. Experiments
5. Problem Solving
6. Design in four Areas\*
7. Contemporary Issues
8. Project Management
9. Breadth in Civil Engineering in four Areas\*
10. Communication
- 11a. Public Policy/Public Administration
- 11b. Business
12. Leadership
13. Multi-disciplinary Team Work
14. Lifelong Learning
15. Professional and Ethical Responsibility

\*Environmental, Geotechnical, Structural, Transportation

### **Construction Engineering Student Outcomes**

At the time of graduation from the construction engineering program a student should have achieved an acceptable level of skills and knowledge in the following areas:

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

### **Civil Engineering Program of Study**

The Civil and Environmental Engineering Department's four-year program begins with courses which provide a foundation of knowledge and skill in the basic arts and sciences. Limited specialization in engineering starts during the sophomore year. In the junior and senior years, the time is devoted essentially to basic professional subjects. Throughout the four years, the program emphasizes the development of habits of orderly study, investigation, sound reasoning, problem-solving and design, rather than the mere acquisition of factual information. It is stressed that an engineer is a professional thoroughly grounded in engineering science and technology, but also aware of the social, economic, ethical, and ecological implications of professional activities. The Citadel's Bachelor's degree program in Civil Engineering is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>. Each year the curriculum is augmented by off-campus educators and engineers who lecture and moderate seminars in engineering specialties. Students' sources of knowledge are broadened by participation in these seminars and the student chapters of the American Society of Civil Engineers, Tau Beta Pi (honorary engineering society), the Society of American Military Engineers, and the Society of Women Engineers (SWE) and the National Society of Black Engineers.

LeTellier Hall was designed for the needs of civil and environmental engineering education and contains, in addition to laboratories, six multi-media classrooms and one multi-media assembly room that contains additional audiovisual aids for special lectures and society meetings. There are three computer facilities located in LeTellier Hall. To help ensure the best use of these facilities, priority access goes to students using software or capabilities specific to the LeTellier sites.

### **Construction Engineering Program of Study**

The construction engineering curriculum provides a broad-based education, a strong background in mathematics and basic sciences, and a rigorous sequence of civil and construction engineering courses needed to provide the breadth and depth necessary for sustainable professional success within an ever-changing technological society. An emphasis is placed on engineering and constructability knowledge and skills that develop student's practical problem-solving abilities for application to real-world projects. Towards accomplishing this educational goal, the curriculum provides a two-semester senior design course in which students undertake significant real-world focused construction engineering projects. Additionally, our faculty promote and support the value of practical experience, and as a result, students are highly encouraged and supported in identifying opportunities and obtaining gainful employment in the construction engineering profession, or a related field, for at least one summer, preferably between the junior and senior years.



*The Main Computer Lab — LeTellier 203*

LeTellier 203 is the primary teaching and student-use computer facility in the Civil and Environmental Engineering Department. The twenty-four student stations and one projection-capable instructor station and laser printer located in this lab are connected to the campus-wide network, and provide direct Internet access via Ethernet. The software in the labs is Windows based. All machines in the lab have graphics-capable WWW browsers. The department's standard general purpose software includes: Microsoft Office, Mathcad, AutoCAD, and ArcGIS. In addition, there are a number of course-specific software packages. Faculty also post: classroom presentations, handouts, programming examples, class notes, and solutions to tests and homework on CitLearn (Blackboard). These postings are in a mixture of formats including PDF files, Mathcad documents, spreadsheet files, executable programs, and multimedia presentation files that students may review as needed before and after class.

*The Special Application Lab — LeTellier 206*

LeTellier 206 is the home of the Civil and Environmental Engineering Department Special Applications Lab. The seventeen student computers serve primarily as AutoCAD, GIS (ArcView) and structural design workstations. Other uses involve construction management, Global Positioning System (GPS) data analysis/adjustment, and traffic engineering studies. Occasionally, small sections of courses may be scheduled in the lab utilizing the instructors-only workstation and projection system. This laboratory is equipped with a networked A-B size laser printer and E-size plotter.

*The Graphics Lab — LeTellier 308*

LeTellier 308 is the home of the Civil and Environmental Engineering Department Graphics Instruction Lab. The instructor's station is equipped with a projection system for both the computer and document camera. The twenty student computers serve primarily as AutoCAD and ArcGIS workstations. This laboratory is equipped with a networked A/B size laser printer.

*Materials Testing Laboratory:* Major items of equipment include a 250,000 pound and another 300,000 pound concrete cylinder testing machine; two 60,000-pound hydraulic universal testing machine; and equipment for making tension, compression, shearing, and most other accepted and significant tests on metals concrete, wood and other structural materials.

*Construction Materials Laboratory:*

Bituminous Materials Testing. This laboratory contains equipment for making the significant quality control and identification tests on asphalt cements, cutback

asphalts, and asphalt emulsions. Equipment for the design, mixing, compaction by both hammer and gyratory means, and testing of asphalt concrete paving mixtures by the Marshall and other methods is included.

*Concrete Materials Testing:* A curing room, mixing equipment, air entraining measuring apparatus, scales, and other minor equipment are provided in this laboratory. Testing is accomplished using materials laboratory equipment.

*Geotechnical Laboratories:* The soil laboratory is equipped with consolidmeters, triaxial and direct shear machines, unconfined compression machines, permeameters, Atterberg limit equipment, Proctor and Modified AASHTO Proctor compaction apparatus, standard sieves, soil hydrometers, C.B.R. apparatus, and other equipment needed for tests and experiments with soils.

*Fluid Mechanics Laboratory:* Equipment is provided for a wide variety of experiments and tests involving the flow of water over weirs or through pipes, meters, orifices, or a Parshall flume. Other major items of equipment include a head loss and flow measurement fluid circuit apparatus, a Reynolds number device, two (2) hydraulic demonstration units permitting experiments involving many phenomena of open channel flow, and a centrifugal pump equipped to measure input and output of energy. In addition, a parallel-series pumping unit is available for students to study parallel-series pumping under a variety of system conditions.

*Environmental Engineering Laboratory:* Equipment is provided for water analysis determination (primarily according to "Standard Methods") of pH, alkalinity, turbidity, conductivity, D.O., and color. Bacteriological examinations may also be made for wastewater analysis, biochemical oxygen demand, solids content and coliform testing. The equipment includes incubators, a muffle furnace, pH meters, dissolved oxygen probes, electrophotometric devices, a constant temperature refrigerator, a spectrophotometer, a drying oven, a type I water generator, a fume hood, a microscope, and essential minor tools and equipment.

*Other engineering equipment:* Adequate equipment is available for the courses in engineering graphics, surveying, geospatial representation, as well as for the junior and senior courses. This equipment includes levels, theodolites, level rods, tapes, six total stations, data collectors, and nine Global Positioning System (GPS) survey grade receivers.

*Fundamentals of Engineering Examination:* Each graduating student is required to sit the Fundamentals of Engineering (FE) Examination and provide documentation to the department head.

*Degree:* The degree of Bachelor of Science in Civil Engineering (B.S. in C.E.) or Bachelor of Science in Construction Engineering (B.S. in Con. E.) is awarded to those who successfully complete the respective programs of studies outlined in the course offerings section of this catalog.

Two humanity or social science electives are required. These are selected from a list of approved electives maintained by the Civil and Environmental Engineering Department. In completing the two humanities or social science electives, the student will take one from the core curriculum. The other will be a departmentally approved course. The civil and environmental engineering capstone design courses allow the students at the senior level to integrate principles and practices of earlier courses into the design of the engineering system.

### **Minor in Civil and Environmental Engineering (Please refer to p. 128)**

#### **Civil and Environmental Engineering Course Descriptions**

CIVL 101 *Engineering Drawing* Two Credit Hours  
Required of all Civil and Environmental Engineering freshmen.

Use and care of drawing instruments; proper weights and types of lines for clear-cut and complete graphical representation; auxiliary and sectional views; pictorial representation with emphasis on isometric drawing, dimensioning, development of a reasonable skill in lettering. A substantial portion of the course is taught using CAD software.

Laboratory: four hours.

CIVL 103 *Introduction to Civil Engineering* One Credit Hour  
Required of all Civil and Environmental Engineering freshmen.

The engineering design process is demonstrated through use of practical problem-solving methods for public infrastructure and built environment projects. Course subjects include civil engineering career paths, ethical canons of the engineering profession, and requirements for professional licensure. Course assignments, conducted within a collaborative learning environment, focus on creative engineering solutions through technical analysis, teamwork, communication skills, and professionalism. As a foundation for sustained success in civil engineering, additional course topics include: lifelong learning, time management, community and professional service, and career development.

Laboratory: two hours.

CIVL 202 *Statics* Three Credit Hours

Corequisites: MATH 131 and PHYS 221/271

Required of all Civil and Environmental Engineering sophomores.

Scalar and vector solutions of problems in statics; resultants, reactions, and equilibrium of forces; analysis of simple trusses; friction; centroids and centers of gravity; and moments of inertia.

Lecture: three hours.

CIVL 203 *Dynamics* Three Credit Hours

Prerequisite: CIVL 202 with a grade of "C" or better.

Required of all Civil and Environmental Engineering juniors.

Kinematics and Kinetics of particles or rigid bodies in plane motion with emphasis on the special cases of translation and rotation. The techniques of vector mathematics are employed.

Lecture: three hours.

CIVL 205 *Surveying* Three Credit Hours

Corequisites: CIVL 101 or CIVL 103 and CIVL 235

Required of all Civil and Environmental Engineering sophomores.

Linear measurements, leveling, compass and transit/theodolite, total stations, theory of errors, latitudes and departures, areas, stadia, datums, coordinate geometry, construction field control, legal aspects of land surveying, and public land surveys.

Lecture: three hours.

CIVL 208 *Geospatial Representation* Three Credit Hours

Prerequisites: CIVL 205 and CIVL 235, MATH 131 or HONR 131.

Required of all Civil and Environmental Engineering sophomores.

Study of geospatial representation applications, techniques, and methods that includes topographic mapping, map projections, reference datums, state plane coordinate systems, Global Positioning Systems (GPS), Geographic Information Systems (GIS), and remote sensing.

Lecture: three hours.

CIVL 210 *Computer Application for Civil and Environmental Engineering* Three Credit Hours

Required of all Civil and Environmental Engineering sophomores.

Instruction in computer applications to problems chosen from civil engineering fields. Development of computer-based methods for analyzing computer engineering systems. The class will address a range of related topics including algorithm development and implementation, professional and ethical aspects of

computer applications, development of self-directed learning skills appropriate for civil engineering.

Lecture: three hours.

CIVL 235 *Surveying I Laboratory* One Credit Hour

Corequisite: CIVL 205

Required of all Civil and Environmental Engineering sophomores.

Application of principles obtained in CIVL 205 through actual field work. Horizontal control activities include distance measurements by tape and EDM, angular measurements by theodolite and total stations, traversing, traverse closure computations, balancing computations, and preparation of boundary plat. Students will be introduced to the use of data collectors as part of their field work. Computer applications and computer-aided drafting are available.

Laboratory: two hours.

CIVL 239 *Geomatics Laboratory* One Credit Hour

Prerequisite: CIVL 205, CIVL 235; corequisites: CIVL 101 and CIVL 208

Required of all Civil and Environmental Engineering sophomores.

Preparation of a topographic map, Geographic Positioning Systems (GPS) mapping controls, Geographic Information System (GIS) applications, and understanding the geometry and nomenclature of horizontal and vertical curves.

Laboratory: two hours.

CIVL 302 *Highway Engineering* Three Credit Hours

Prerequisite: CIVL 305; corequisite: CIVL 327

Required of all Civil and Environmental Engineering juniors.

Highway alignment, right-of-way and easements; earthwork and grading; road user benefits, traffic operations and capacity; design of intersections and interchanges; construction surveys; drainage design; highway materials; design of asphalt mixtures; pavement thickness design; and construction management, contracts, estimates and specifications. Preparation of plans and design documentation for a highway project including: horizontal alignment, vertical alignment, roadway cross-sections, storm water drainage, earthwork and mass diagram calculations, and construction materials.

Lecture: three hours.

CIVL 304 *Mechanics of Materials* Three Credit Hours

Prerequisite: CIVL 202 with a grade of "C" or better.

Required of all Civil and Environmental Engineering juniors.

Elastic properties of structural materials, internal stresses and strains, prin-

cipal stresses and strains including Mohr's Circle, axial, torsion, flexure, shear, bolted joints, combined stresses, shear and moment diagrams, beam deflections. Supplemented by CIVL 307.

Lecture: three hours.

CIVL 305 *Transportation Engineering* Three Credit Hours

Prerequisites: CIVL 101, CIVL 103, CIVL 208, CIVL 239

Required of all Civil and Environmental Engineering juniors.

A study of technical, multimodal, and organizational interrelationships of United States transportation mobility systems focusing on policy, planning, capacity, operation, and design of land transportation, airport and seaport facilities. Topics include highway design, roadway safety, traffic engineering, travel forecasting, railroad alignment, public mass transit, airport layout, and harbors/ports.

Lecture: three hours.

CIVL 307 *Materials Laboratory* One Credit Hour

Prerequisite: ENGL 102; prerequisites or corequisites: CIVL 210, CIVL 304.

Required of all Civil and Environmental Engineering juniors.

Laboratory supplement to CIVL 304. Introduction to the use of testing machines and equipment; strength and deformation measurements of ferrous and non-ferrous metals, concrete, and wood; properties of materials as determined by results of tests in compression, tension, bending, torsion; behavior of columns; use of electric resistance strain gages; use of ASTM specifications and test procedures. Taken concurrently with or subsequent to CIVL 304.

Laboratory: two hours.

CIVL 309 *Structural Analysis* Four Credit Hours

Prerequisites: CIVL 304 with a grade of "C" or better and MATH 132

Required of all Civil and Environmental Engineering juniors.

Structural analysis of determinate and indeterminate beams and frames using classical, approximate and computer-based methods.

Lecture: four hours.

CIVL 310 *Statics and Mechanics of Materials for Non-Civil Engineers* Three Credit Hours

Prerequisites: MATH 132 and PHYS 221/271

Vector solutions of problems in statics; principles of statics, resultants, reactions, and equilibrium of forces. In addition, the brief study of mechanics of materials including stress and strain relationships and various types of loading

on structural members.

Lecture: three hours.

CIVL 314 *Engineering Economy* Two Credit Hours

Required of all Civil and Environmental Engineering juniors.

Topics include the time value of money, equivalence, simple and compound interest, nominal and effective interest rates, present worth and capitalized cost evaluation, equivalent uniform annual worth evaluation, rate of return evaluation, benefit/cost ratio evaluation, depreciation, corporate and individual income tax, after-tax economic analysis, and engineering ethics as applied by practicing engineers.

Lecture: two hours.

CIVL 320 *Fluid Mechanics* Three Credit Hours

Required of all Civil and Environmental Engineering juniors.

Prerequisite: CIVL 202 with a grade of "C" or better

Prerequisites or Corequisites: Either MATH 231 or MATH 234.

An introduction to fluid characteristics, properties, and the fundamentals of fluid statics, fluid dynamics, fluid flow, and fluid measurements. Hydraulic principles including pressurized pipe flow and open channels are also covered. Classroom assignments include design problems and problem solving.

Lecture: three hours.

CIVL 321 *Hydrology and Hydraulics* Three Credit Hours

Prerequisite: CIVL 320

Required of all Civil and Environmental Engineering juniors.

This course focuses on presentation and application of fundamental hydraulic and hydrology principles including hydrologic cycle; hydrograph development; flood routing; design of storm water systems and water distribution systems, pipe networks, pumping systems, flow through orifices, flumes and weirs; and design of hydraulic structures.

Lecture: three hours.

CIVL 322 *Introduction to Environmental Engineering* Three Credit Hours

Prerequisites: CIVL 320, CHEM 151, CHEM 161, BIOL 150, BIOL 151, and either MATH 231 or MATH 234.

Introduction to water, air, solid and hazardous waste. Included are social and ethical considerations, legal and regulatory principles, risk analysis, the effect of pollutants in the environment, groundwater flow theory and application,

and the engineering principles governing the generation and control of these pollutants.

Lecture: three hours.

CIVL 327 *Asphalt and Concrete Laboratory* One Credit Hour

Prerequisite: CIVL 307; corequisite CIVL 302.

Required of all Civil and Environmental Engineering juniors.

Laboratory applications involving design, preparation, curing and testing of asphalt and Portland cement concrete. Includes testing for component properties, component selection and grading, material handling, mix design, blending, applicable standards and specifications, construction practices, quality control, specimen testing and safety. Marshall and Superpave mix design procedures and testing methods are used to conduct laboratory data collection and analysis. Emphasis is placed on professional laboratory report preparation.

Laboratory: two hours.

CIVL 330 *Measurements, Analysis and Modeling for CEE Systems* Three Credit Hours

Prerequisite: CIVL 210

In this course, students are introduced to several concepts and techniques essential to the modern civil engineer: uncertainty and variability of physical systems; analysis of measurement systems; physical modeling and scaling techniques; mathematical and numerical modeling; and the impact of uncertainty on project economics. Both theory and application are presented with a very strong emphasis placed on hands-on exploration. The course requires students to employ the computer skills acquired in CIVL 210 for many assignments.

Lecture: three hours.

CIVL 402 *Geotechnical Engineering Laboratory* One Credit Hour

Prerequisite: CIVL 409; corequisite: CIVL 410

Required of all Civil and Environmental Engineering seniors.

Field and laboratory applications of typical methods for determining engineering properties of cohesive and granular soils. Experimental topics include specific gravity, particle size distribution, clay soil consistency, engineering classification, permeability, compaction, consolidation, *in situ* soil properties, soil boring and sampling techniques, and shear strength parameter determination using unconfined direct, triaxial, vane shear and penetration apparatus.

Laboratory: two hours.

CIVL 404 *Reinforced Concrete Design* Three Credit Hours

Prerequisites: CIVL 309

Required of all Civil and Environmental Engineering seniors.

Design of reinforced concrete structures using strength design theory. Design of beams, columns, combined stress members, footings, and retaining walls. Comprehensive analysis and design of a building frame and foundation system are included. Special attention is given to the use of current specifications for design and construction. The use of computer programs to facilitate analysis and design during the comprehensive problem is encouraged.

Lecture: three hours.

CIVL 406 *Steel Design* Three Credit Hours

Prerequisite: CIVL 309

Required of all Civil and Environmental Engineering seniors.

Theory and design of steel structures using the load and resistance factor design method. Design of tension and compression members, beams and columns. Computer solutions are utilized for design shears, moments, and axial loads.

Lecture: three hours.

CIVL 408 *Water and Wastewater Systems* Three Credit Hours

Prerequisites: CIVL 322, CHEM 152/162, MATH 231, and MATH 234

Required of all Civil and Environmental Engineering seniors.

Introduction to engineering design principles and practices including water use, quality standards for drinking water, water treatment systems, determining the quantity of wastewater, design of sanitary sewers, quality criteria for surface waters, and wastewater treatment systems.

Lecture: three hours.

CIVL 409 *Introduction to Geotechnical Engineering* Three Credit Hours

Prerequisites: CIVL 304 (with a grade of "C" or better), CIVL 322, MATH 231, and MATH 234

Required of all Civil and Environmental Engineering seniors.

Introduces the student to the rudiments of theoretical soil mechanics. Topics include engineering uses of soils; laboratory and field determination of soil properties; determination of phase relationships; engineering soil classification; soil-water interaction and seepage flow mechanics; stress effects of loading on soils at depth; and consolidation, compaction, shear strength, and bearing capacity theory.

Lecture: three hours.

CIVL 410 *Geotechnical Engineering II* Three Credit Hours

Prerequisite: CIVL 409; corequisite: CIVL 402

Required of all Civil and Environmental Engineering seniors.

An introductory course in geotechnical analysis and design. Topics include shallow foundations, spread footings, deep foundations, piles and caissons, lateral earth pressure for cohesive and cohesionless soils, slope stability analysis, subsurface investigations and special topics including such subjects as soil stabilization methods, geotextile applications, liquefaction, etc.

Lecture: three hours.

CIVL 411 *Engineering Management* Three Credit Hours

Prerequisite: Completion of all freshman and sophomore courses or approval of the department head.

Application of management skills, methods, and techniques used to effectively perform engineering, design, and construction projects. Course topics include project scheduling, contract documents, multidisciplinary teams, public administration, communication, public policy, ethical responsibility, life long learning skills, and engineering leadership. Emphasis is placed on professional relationships between government agencies, owners, engineers, and contractors to achieve project requirements and produce engineering deliverables.

Lecture: three hours.

CIVL 412 *Engineering Practice and Professional Licensure* One Credit Hour

Prerequisite: Senior standing in civil and environmental engineering.

Required of all Civil and Environmental Engineering seniors. This class provides a review for the NCEES Fundamentals of Engineering Computer Based Exam.

CIVL 418 *Fluid Mechanics Laboratory* One Credit Hour

Prerequisite: CIVL 321

Required of all Civil and Environmental Engineering seniors.

Accomplishments of laboratory exercises and experiments to illustrate basic concepts of fluid mechanics and to validate empirical formulas used in hydraulic computations. Principal emphasis is on the phenomena associated with closed conduit and open channel flow of water, measurement of velocities and flow rates, and operational characteristics of pumps. A minimum of one experiment will involve the use of the computers to evaluate laboratory data.

Laboratory: two hours.

CIVL 419 *Environmental Engineering Laboratory* One Credit Hour

Prerequisite: CIVL 408

Required of all Civil and Environmental Engineering seniors.

Accomplishment of chemical, physical, and microbiological determinations used in the examination of water and wastewater. Laboratory analysis to evaluate water quality will be performed, such as biochemical oxygen demand, suspended solids, pH, alkalinity, and others. A minimum of one laboratory experiment will involve the use of the computer to evaluate laboratory data.

Laboratory: two hours.

### **Civil and Environmental Engineering Design Electives**

Each Civil and Environmental Engineering major must complete a two-semester capstone design experience. The capstone sequence provides students an opportunity to:

- function with multi-disciplinary teams
- identify, formulate, and solve realistic engineering problems where economic, environmental, and sustainability, and manufacturability are considered
- understand professional and ethical responsibilities
- communicate effectively
- understand the political, global, and social impacts of engineering solutions
- understand the regulatory review process

CIVL 432/433 *Civil Engineering Design Capstone I and II* Three Credit Hours  
Each Semester

CIVL 432

Prerequisite: Senior standing in civil and environmental engineering.

Corequisites: CIVL 404, CIVL 408, CIVL 410, CIVL 411

CIVL 433

Prerequisite: CIVL 432

Ethical canons of the engineering profession require civil engineering graduates be well-rounded effective leaders in planning, design, and construction of public infrastructure and the built environment needed to establish safe, healthy, equitable and vibrant communities. Students will apply engineering principles, through design team initiatives and lecture directives, to develop solutions for

a comprehensive design problem using methods of professional engineering practice involving multi-disciplinary aspects of civil engineering including structural, environmental, geotechnical and transportation.

CIVL 450 *Civil and Environmental Engineering Internship* Three Credit Hours

Prerequisite: Permission of Department Head

This course gives Civil and Environmental Engineering students real-world work experience to complement the classroom education that they have previously received. Interns will learn about the variety of issues facing today's practicing engineer. Interns will spend at least five hours each week working alongside senior-level managers in Charleston area engineering firms or engineering related regulatory agencies coordinating these activities through the Department of Civil and Environmental Engineering.

CIVL 453 *Special Topics in Civil Engineering* Three Credit Hours

Prerequisite: Permission of Department Head

Selected topics in civil engineering. The offering of this course will depend upon the interest of the student, the availability of an instructor, and the approval of the department head. Since the content of this course may change, a student may repeat the course for credit with the consent of the department head.

### **Construction Engineering Course Descriptions**

CONE 302 *Engineering/Construction Law, Ethics, Safety, and Contracts* Four Credit Hours

Introduction to basic contract and tort issues and their application in the construction industry; delineation of the various types of contracts and remedies available to parties involved in a construction project; additional related topics including bidding, delays, mechanics liens, site conditions, warranties and the Uniform Commercial Code as it relates to the construction industry. Examine the application of OSHA 29CFR 1926 for the construction industry along with applicable state and federal construction safety laws pertaining to construction, altercations, or repair work at construction site.

CONE 311 *Resource Estimating* Three Credit Hours

Systems approach to determining required quantities of construction materi

als; quantification of various types of foundation systems, structural systems and building envelope systems using excerpts of contract documents from a variety of different building projects.

CONE 312 *Advanced Estimating* Three Credit Hours  
Prerequisite: CONE 311

Quantification and pricing of direct field costs and general condition costs from construction documents; the preparation of complete lump sum bid package ready for project execution; utilization of entire set of required contract documents.

CONE 320 *Engineering Materials and Methods (& Lab)* Three Credit Hours

Corequisite: CIVL 304

Materials, methods and sequences of the construction process; emphasis on design, specification, purchase and use of concrete, steel, masonry and timber. An understanding of the uses of construction materials.

CONE 330 *Quality Management and Labor Relations* Three Credit Hours

Identify, explain and apply quality management techniques for construction engineering services, construction projects, and related deliverables through use of continuous improvement procedures, analytical tools and techniques focusing on resource allocation, workforce requirements, performance schedule, quality control, and total quality systems. Best practice principles in labor relations and management will be reviewed and evaluated including labor relations law, construction contracts, incentives and penalties, construction agreements and partnerships, collective bargaining, and unionized/nonunionized construction workforce considerations.

CONE 340 *Structural Analysis and Design* Three Credit Hours  
Prerequisite: CIVL 304

Application of statics and strength of materials for construction of steel buildings, reinforced concrete structures, reinforced masonry structures, and timber structures with computer analysis and design of specific topics.

CONE 350 *Commercial Construction and Engineering Equipment* Three Credit Hours

Prerequisite: CONE 311

Prepare students to enter the commercial construction sector through consideration of design, bidding/estimating, value engineering, contracts/negotiation, subcontractor relations, cost controls, management during construction, close out, post-construction requirements and the engineering equipment used during horizontal and vertical construction.

CONE 360 *Soils and Foundations (& Lab)* Three Credit Hours  
Prerequisite: CIVL 304

Introduction to soil types found on construction projects; testing, properties and classification of soil; embankment control, dewatering, excavation, foundations, piers, and pilings.

CONE 410 *Project Scheduling* Three Credit Hours  
Prerequisite: CONE 311

An introduction to construction project scheduling covering concepts of project selection and scheduling, utilizing the estimate to predict the schedule, scheduling subcontracting, cost controls, project documentation, construction bonds, insurance, payments and the elements of close out.

CONE 415 *Project Management and Engineering Administration* Three Credit Hours

Prerequisite: BADM 202, 211

Project planning, cost controls, and construction related financial documents including: schedule of values, labor and operations cost reports, income statements, balance sheets and construction budgets; emphasis on the development of techniques required to ethically and effectively monitor the financial aspects of a construction project and manage engineering projects.

CONE 440 *Construction Methods and Temporary Structural Design* Three Credit Hours

Prerequisite: CONE 340

Common construction methods are introduced and building details are explored considering material applications and detailing in structural and non-structural building components and physical processes lying behind the design of a building's envelope and interior. A set of prints and specifications will structure our discussion of the building process. Study of the materials, methods and techniques associated with temporary structures utilized in various construction operations, such as concrete formwork, scaffolding, falsework/shoring, cofferdams, underpinning, diaphragm/slurry walls, earth-retaining structures and construction dewatering systems.

CONE 450 *Facilities Operations and Maintenance (BIM)* Three Credit Hours

Prerequisite: BADM 202, 211

Each facility has distinct operations, maintenance and capital project delivery needs. Leaders must leverage facility data created throughout the design and construction process and lifecycle to provide safe, healthy, effective and efficient work environments for their clients. The maintenance of this data will create greater efficiencies such as: having accurate as-built information to reduce the cost & time required for renovations; increasing customer satisfaction; and optimizing the operation and maintenance of our building systems to reduce energy

usage. Building Information Modelling (BIM) is about ensuring teams have the relevant knowledge and capabilities to achieve best practice and effectively manage information across all stages of your construction projects.

CONE 460      *Mechanical and Electrical Systems*      Three Credit Hours

Prerequisites: PHYS 221/PHYS 271

Mechanical and electrical systems with a major emphasis on the estimate and installation, design and control of the electrical, heating, ventilation and cooling system, site planning and acoustical treatments.

CONE 470      *Production Processes and Rapid Product Development*      Three Credit Hours

Prerequisite: CONE 311

This course is an introduction to manufacturing processes and manufacturing systems including assembly, machining, injection molding, casting, thermoforming, and more. Emphasis on the physics and randomness and how they influence quality, rate, cost, and flexibility. Attention to the relationship between the process and the system, and the process and part design. Project (in small groups) requires fabrication (and some design) of a product using several different processes.

CONE 481      *Senior Design I*      Two Credit Hours

Prerequisite: Department Chair approval.

This course is the first in the Construction Engineering capstone series and provides project definition, project planning, scheduling, and results in a presentation and plan for a 35% presentation.

CONE 482      *Senior Design II*      Three Credit Hours

Prerequisite: Department Chair approval

Utilize information from all previous courses to prepare construction engineering documents for a given project. Respond to an RFP announcement or bid.

## Department of Electrical and Computer Engineering

Department Head: Barsanti

Professors: Barsanti, McKinney, Peebles, Potisuk

Associate Professors: Hayne, Mazzaro, Skinner

### General Information

In 1941 the Board of Visitors authorized the establishment of a Department of Electrical Engineering at The Citadel. Because World War II intervened, the first electrical engineering degrees were awarded to the class of 1948. The electrical engineering program is offered in two modes—day mode and the 2+2 evening mode. The day mode is open only to members of the South Carolina Corps of Cadets, military veterans, and enlisted active duty students assigned to one of The Citadel's ROTC Departments. Cadets must take sixteen hours of ROTC and four hours of Health and Physical Education in addition to two Required Physical Education non-credit courses. The 2+2 evening mode is open to transfer students and does not require ROTC or Health and Physical Education. Otherwise curricula, faculty, textbooks, laboratory equipment, course content, classrooms, and laboratory rooms are the same for both modes.

The Electrical and Computer Engineering Department is located on the third floor of Grimsley Hall, a first-tier engineering education facility that provides fully-equipped laboratories, classrooms and faculty offices. The related Departments of Mathematics and Computer Science, Physics, and Civil and Environmental Engineering are housed adjacent to the department, creating a “micro-campus” of science and technology.

The student branch of the Institute of Electrical and Electronics Engineers was established in 1962 and is an active component of the electrical engineering program. A Citadel chapter of Tau Beta Pi, the national engineering honor society, recognizes junior and senior students who meet the organization's high academic standards.

The bachelor of science electrical engineering program is accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET), <http://www.abet.org>.

### Mission

The mission of the Department of Electrical and Computer Engineering is to prepare the individual for professional work or for graduate study in the fields of electrical and computer engineering and to provide as many of the elements of a broad education as can be included in a program of professional study leading to the degree of Bachelor of Science in Electrical Engineering.



In addressing its mission, the department strives, through small classes and hands-on experience in laboratories closely monitored by full-time faculty, to provide an environment highly conducive both to learning and to the development of close student-faculty relationships.

The electrical engineering curriculum places emphasis on a broad liberal education base, a strong background in mathematics and basic sciences, and a logical sequence of electrical and computer engineering courses that provide the breadth and depth necessary for continuous professional growth in today's technological society. In the junior year the electrical engineering student normally selects an area of professional emphasis such as computer engineering, control systems, communication systems, electronics, or power systems. An integral part of the program is the design component that develops the student's ability to address practical engineering problems. This is accomplished by the inclusion of engineering design problems and concepts throughout the curriculum and capped by a mandatory two-semester senior design course in which students undertake significant design projects.

Convinced of the great value of practical experience, the department encourages its majors to obtain gainful employment in electrical engineering or a related field for at least one summer, preferably between the junior and senior years.

### **Program Educational Objectives**

The Citadel Department of Electrical and Computer Engineering program prepares graduates to:

- Succeed in the practice of electrical engineering, by ethically and judiciously applying knowledge of science, mathematics and engineering methods to solve problems facing a technologically complex society.
- Apply and operate current hardware and software tools, equipment, and development environments to conduct and/or lead engineering analysis, design and research.
- Value and pursue lifelong learning, not only to keep current in electrical and computer engineering fields, but also to sustain awareness of engineering-related issues facing contemporary society.
- Pursue graduate education and/or professional registration as desired or required.
- Be principled leaders with strong communications and team-building skills.

### **Student Outcomes**

The Citadel's Electrical Engineering program includes assessment to demonstrate that students obtain:

1. an ability to apply knowledge of mathematics, science and engineering
2. an ability to design and conduct experiments, as well as to analyze and interpret data
3. an ability to design a system, component, or process to meet desired needs
4. an ability to function on multi-disciplinary teams

5. an ability to identify, formulate, and solve engineering problems
6. an understanding of professional and ethical responsibility
7. an ability to communicate effectively
8. the broad education necessary to understand the impact of engineering solutions in a global and societal context through a broad education
9. a recognition of the need for, and an ability to engage in life-long learning
10. a knowledge of contemporary issues
11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

### **Electrical Engineering Curriculum**

The electrical engineering educational experience begins in the freshman engineering fundamentals course, ELEC 106. This freshman course develops basic skills and good teamwork habits through team case studies requiring the communication of creative ideas. The second semester freshman curriculum includes 3 credit hours of computer applications for electrical engineers. The study of electrical engineering topics in the sophomore year includes 6 credit hours of electric circuit analysis, 3 credit hours of digital logic and circuits, 3 credit hours of digital systems, and 1 credit hour of electrical laboratory. Theory is combined with application, demonstration, and experimental verification. In addition the first two years include 16 credit hours of mathematics, 8 credit hours of chemistry and/or biology, 8 credit hours of physics, and 18 credit hours of English and history to provide the foundation necessary for an engineering education.

The junior year requires a total of 17 credit hours of electrical engineering course work. Breadth of coverage is provided by courses in signals and systems analysis, electronics, systems (automatic controls), digital circuits and systems, electromagnetics, and electromechanical energy conversion. Many of these courses include engineering design problems drawn from the experience of the faculty. First semester juniors complete their fifth mathematics course, MATH 335 (Applied Mathematics II), which provides coverage of mathematical topics required in upper division electrical engineering courses. There is a single junior year elective course that must be technical in nature and outside the mainstream of electrical engineering.

The senior year provides depth in electrical and computer engineering by requiring five out of an available seventeen 400-level electrical engineering elective courses taught and at least one approved Computer Science elective. The elective courses are ELEC 307 (Nuclear Engineering), ELEC 401 (Electronics II), ELEC 403 (Electric Power Systems), ELEC 405 (Electrical Measurements), ELEC 407 (Systems II), ELEC 413 (Advanced Topics in Electrical Engineering), ELEC 414 (System Simulation), ELEC 416 (Communications Engineering), ELEC 418 (Advanced Digital Systems), ELEC 419 (Computer Network Architecture), ELEC 423 (Digital Signal Processing), ELEC 424 (Solid-State Devices), ELEC 425 (Interference Control in Electronics), ELEC 426 (Antennas and Propagation), ELEC 427 (Energy Systems Engineering), ELEC 428 (Computer Architecture),

ELEC 430 (Independent Research in Electrical Engineering), ELEC 450 (Electrical Engineering Internship), and CSCI 420 (Software Engineering). These electives provide the student the opportunity to pursue an area of interest. While narrow specialization is neither possible nor desirable at the undergraduate level, these three-credit electives provide depth in both design and theory in their specialized areas. Below are several examples of possible areas of concentration available to the student.

#### **Computer Engineering**

CSCI 223	Data Structures (Prerequisites: CSCI 201, 202 and MATH 206)
CSCI 420	Software Engineering
ELEC 405	Electrical Measurements
ELEC 418	Advanced Digital Systems
ELEC 419	Computer Network Architecture
ELEC 423	Digital Signal Processing
ELEC 428	Computer Architecture

#### **Power Engineering**

CIVL 310	Statics and Mechanics of Materials for Non-Civil Engineers
ELEC 307	Nuclear Engineering
ELEC 403	Electric Power Systems
ELEC 407	Systems II
ELEC 405	Electrical Measurements
ELEC 426	Antennas and Propagation
ELEC 427	Energy Systems Engineering

#### **Communications**

PHYS 308	Optics
ELEC 401	Electronics II
ELEC 416	Communication Engineering
ELEC 419	Computer Network Architecture
ELEC 423	Digital Signal Processing
ELEC 426	Antennas and Propagation

#### **Electronics**

PHYS 410	Thermodynamics
ELEC 401	Electronics II
ELEC 418	Advanced Digital Systems
ELEC 423	Digital Signal Processing
ELEC 424	Solid State Devices
ELEC 405	Electrical Measurements

### **Electrical Engineering Design Experience**

Engineering design is distributed throughout the electrical engineering curriculum. Introduction to the design process and the initial design experience occurs in the freshman course, ELEC 106. The engineering profession and the ethical responsibilities of professional engineers are discussed. Design problems are posed that require little or no in-depth engineering knowledge. For example, a first problem might ask the student to design a dormitory room workplace. Functionality, aesthetics, and cost of implementation are a few of the issues to be considered. Case studies are assigned that provide an opportunity for the students to work in teams. The emphasis is on the synthesis of a product that meets broad requirements. The students are introduced to the concept of design in which there is no single right answer and relatively few limits placed on the

creative process.

Techniques of analysis, synthesis, iteration, and approximations are studied in the sophomore and junior electrical engineering courses. Specialized design exercises illustrate the use of these techniques in the areas of circuits, systems, electronics, electromagnetics, and digital systems.

The senior year provides the opportunity for the student to begin to focus on design techniques in a particular area of interest through the choice of five senior electrical engineering elective courses. Examples range from the use of a load flow program to determine operational conditions of a small power system in a contingency situation (ELEC 403), to the design of a state estimator (ELEC 407), to the design and implementation of digital filters (ELEC 423).

The design experience culminates in the required senior design courses, ELEC 421 and ELEC 422. This two-semester design sequence provides students the opportunity to work on a project of interest and provides the faculty the opportunity to guide students in their first major design experiences and emphasize once more the various constraints that may come into play in a design. The students are taught several different structured design approaches. Project definition and documentation are stressed. Design teams of three to four students are formed at the beginning of the first semester. Students are instructed on various practical aspects of design, such as layout considerations, safety, functionality, and documentation of design. The student design teams select or propose a major design project to be completed by the end of second semester. They must enlist a faculty advisor to guide their project. At the end of the first semester the design teams present their design proposals (written and oral) that include their preliminary design (block diagram level), a schedule for the following semester, and a cost estimate. In the second semester, the teams do the detailed design and build, test, refine, demonstrate, and document their design projects. In addition to the technical aspects, project management and presentation techniques are taught and applied. A detailed project specification is developed and placed under tight change control. Financial and scheduling aspects of the project are tracked. A final presentation in both written and oral form is required at the end of the semester, along with a working demonstration.

**Minor in Computer Engineering**  
(Please refer to p. 129)

**Minor in Electrical Engineering**  
(Please refer to p. 136)

### **Electrical Engineering Course Descriptions**

ELEC 106 *Fundamentals of Electrical Engineering* Three Credit Hours  
Required of electrical engineering freshmen.

An introduction to the engineering profession, branches and functions of engineering, professional ethics, and the role of engineers in society. Fundamentals of engineering problem solving and the use of calculators and computers as tools

to aid in problem solving. Includes subject areas common to most engineering disciplines such as the introduction to the engineering design process and teamwork through a design project, engineering laboratory skills, report writing, and engineering economics, but through the use of electrical engineering exemplars.

Lecture: three hours

ELEC 201 *Electric Circuit Analysis I* Three Credit Hours

Corequisites: MATH 131, PHYS 221/271.

Required of electrical engineering sophomores.

Circuit elements; Kirchhoff's and Ohm's Law and their application through a variety of circuit analysis techniques; operational amplifiers; and the transient response of simple circuits. The circuit analysis program SPICE is introduced.

Lecture: three hours

ELEC 202 *Electric Circuit Analysis II* Three Credit Hours

Prerequisites: ELEC 201 with a grade of C or better or the successful completion of both ELEC 208 and ELEC 204 with grades of C or better.

Prerequisites or corequisites: MATH 132, PHYS 222/272

Required of electrical engineering sophomores.

Sinusoidal analysis and phasors; AC power; three-phase circuits; frequency response of simple circuits; the use of SPICE for ac circuit analysis.

Lecture: three hours

**Students must earn at least a "C" in ELEC 202 before enrolling in any ELEC courses for which ELEC 202 is a prerequisite.**

ELEC 204 *Electrical Laboratory* One Credit Hour

Prerequisites or corequisites: ELEC 202 or ELEC 208

Required of electrical engineering sophomores.

An introduction to the experimental method. Laboratory exercises are designed to supplement the material presented in ELEC 201 and ELEC 202.

Laboratory: two hours.

ELEC 206 *Computer Applications for Electrical Engineers* Three Credit Hours

Required of electrical engineering freshmen.

The computer is presented as a tool for the solution of electrical engineering problems. High level programming of computers; data manipulation, plotting, and equation solving using application programs such as MATLAB.

Lecture: three hours.

ELEC 208 *Principles of Electrical Engineering* Three Credit Hours

Prerequisite or corequisite: MATH 131; consent of department head is required for electrical engineering majors.

This course in electrical engineering for non-electrical engineering majors provides a foundation in basic circuit theory and analysis, power in circuits, and analog electronics. Theories and concepts presented in the course are illustrated through lecturers, practical applications, and laboratory work.

Lecture: two hours; laboratory: two hours

ELEC 302 *Electrical Machinery Laboratory* One Credit Hour

Prerequisite or corequisite: ELEC 316

Required of electrical engineering juniors.

A laboratory course to accompany ELEC 316.

Laboratory: two hours.

ELEC 306 *Electronics I* Three Credit Hours

Prerequisites: ELEC 202, ELEC 204

Corequisite: ELEC 313

Required of electrical engineering juniors.

Characteristics of solid-state devices; diodes; transistor biasing and stabilization; theory and design of low-frequency amplifiers, utilizing bipolar and MOS devices.

Lecture: three hours.

ELEC 307 *Nuclear Engineering* Three Credit Hours

Prerequisite: PHYS 222/272

An introduction to the theory and application of nuclear energy. Topics include fission and the chain reaction; nuclear fuels; nuclear reactor principles, concepts, examples, construction, operation, and ecological impact; radiation hazards and shielding; and nuclear propulsion.

Lecture: three hours.

ELEC 308 *Elements of Electrical Engineering* Three Credit Hours

Prerequisite: MATH 131

Fundamental electrical concepts and units; basic laws of electrical circuits; equivalent circuits; DC and steady-state AC circuit analysis; and effective current, average power, and three-phase power.

Lecture: three hours.

ELEC 309 *Signals and Systems* Three Credit Hours

Prerequisites: ELEC 202, ELEC 204, ELEC 206; prerequisite or corequisite: MATH 335

Required of electrical engineering juniors.

The study of continuous and discrete systems utilizing Laplace and z-transform theory.

Lecture: three hours.

ELEC 311 *Digital Logic and Circuits* Three Credit Hours

Required of electrical engineering sophomores.

Introduction to discrete mathematics topics such as Boolean algebra; digital data coding, and digital arithmetic. Design of combinational and sequential circuits; design, implementation and testing of digital circuits using field programmable gate arrays. Employs VHDL and other industry standard design tools.

Lecture: three hours.

- ELEC 312 *Systems I* Three Credit Hours  
 Prerequisite: ELEC 309  
 Required of electrical engineering juniors.  
 An introduction to feedback control systems, system representation, stability, root-locus and frequency response, and compensation.  
 Lecture: three hours.
- ELEC 313 *Electronics Laboratory* One Credit Hour  
 Prerequisite: ELEC 204  
 Corequisite: ELEC 306  
 Required of electrical engineering juniors.  
 Experimental studies coordinated with the subjects introduced in ELEC 306.  
 Laboratory: two hours.
- ELEC 316 *Electromechanical Energy Conversion* Three Credit Hours  
 Prerequisite: ELEC 309 or consent of the department head; prerequisite or corequisite: ELEC 302  
 Required of electrical engineering juniors.  
 Analysis of transformers; fundamentals of electromechanical energy conversion; and study of DC, induction, and synchronous machines.  
 Lecture: three hours.
- ELEC 318 *Electromagnetic Fields* Three Credit Hours  
 Prerequisites: ELEC 202, PHYS 222/272, MATH 335.  
 Required of electrical engineering juniors.  
 Static electric and magnetic fields; experimental laws and their relation to Maxwell's equations and their applications; Laplace's equation; boundary value problems; time varying fields and plane waves.  
 Lecture: three hours.
- ELEC 330 *Digital Systems Engineering* Three Credit Hours  
 Prerequisite: ELEC 311  
 Required of electrical engineering sophomores.  
 Microcontroller fundamentals including architecture, assembly language programming, and interfacing. Applications of industry-standard microcontrollers in embedded systems. Employs software design tools, simulators, and hardware trainers.  
 Lecture: three hours.
- ELEC 401 *Electronics II* Three Credit Hours  
 Prerequisites: ELEC 306 and ELEC 313  
 Characteristics and applications of analog and digital circuits. Topics may include power electronics, buck and boost converters, switching amplifiers, differential amplifiers, power amplifiers, multistage amplifiers, oscillators, filter circuits, and CMOS digital logic.  
 Lecture: three hours.

- ELEC 403 *Electric Power Systems* Three Credit Hours  
 Prerequisite: ELEC 316  
 Prerequisite or corequisite: ELEC 318  
 A study of electrical power generation, transmission, and distribution; symmetrical components, per-unit analysis, calculation of transmission-line parameters and load flow.  
 Lecture: three hours.
- ELEC 405 *Electrical Measurements* Three Credit Hours  
 Prerequisite: ELEC 313  
 An introduction to modern electrical instrumentation and measurements. Topics include measurement theory, analog and digital signal conditioning, noise, transducers, instrumentation system design, digital interfaces, and computer-based instrumentation and measurement.  
 Lecture: three hours.
- ELEC 407 *Systems II* Three Credit Hours  
 Prerequisite: ELEC 312  
 A continuation of Systems I with primary emphasis on digital control systems. Topics include state-variable analysis, simulation techniques, controllability, state-variable feedback, observability, and state estimator design.  
 Lecture: three hours.
- ELEC 412 *Applied Probability and Statistics for Engineers* Three Credit Hours  
 Prerequisites: MATH 231, ELEC 206.  
 Required of all electrical engineering majors.  
 Application of the theory of probability and statistics in modeling random phenomena and signals; in the calculation of system responses; and in making estimates, inferences and decisions in the presence of chance and uncertainty. Applications will be studied in areas such as communications, power systems, device modeling, measurements, reliability and quality control.  
 Lecture: three hours.
- ELEC 413 *Advanced Topics in Electrical Engineering* Three Credit Hours  
 Advanced topics in electrical engineering. Offered occasionally when the special interests of students and faculty coincide. The syllabus must be approved by the Electrical Engineering Faculty. Since the content of the course may change, a student may repeat this course for credit with the permission of the department head.  
 Lecture: three hours.
- ELEC 414 *System Simulation* Three Credit Hours  
 Prerequisite: ELEC 312  
 An introduction to system concepts, mathematical models of systems, and simulation methods applied to a broad range of systems. Design project required.  
 Lecture: three hours.

- ELEC 416 *Communications Engineering* Three Credit Hours  
 Prerequisites: ELEC 309 and ELEC 311  
 Prerequisite or corequisite: ELEC 306  
 Principles of amplitude, frequency, and pulse modulation; signal flow and processing in communications systems; and analog and digital communication systems.  
 Lecture: three hours.
- ELEC 418 *Advanced Digital Systems* Three Credit Hours  
 Prerequisite or corequisite: ELEC 330 or CSCI 305  
 Experience in advanced digital design techniques and exposure to the development tools used in the design of advanced digital systems. Topics include the design of digital systems using VHDL, industry standard FPGA devices and software, and microprocessor hardware components.  
 Lecture: three hours.
- ELEC 419 *Computer Network Architecture* Three Credit Hours  
 This course will cover network architectures and protocols. Included are transmission technologies, encoding/decoding schemes, packet switching, frame relay, ISDN, ATM and performance modeling techniques.  
 Lecture: three hours.
- ELEC 421 *Design I* Three Credit Hours  
 Prerequisites: ELEC 302, ELEC 306, ELEC 312, ELEC 313, ELEC 316, ELEC 330, and ELEC 318, or consent of the department head.  
 Required of electrical engineering seniors.  
 Initiation, design, scheduling, documentation and reporting on a major design project. Normally accomplished by students working in small groups. All students will make written and oral presentations on their contributions to the project. Financial, legal, ethical, societal, regulatory, environmental, manufacturability, and quality issues will be discussed and will constrain the designs as appropriate.  
 Lecture: one hour; laboratory: four hours.
- ELEC 422 *Design II* Three Credit Hours  
 Prerequisite: ELEC 421 taken the preceding semester.  
 Required of all electrical engineering seniors.  
 Continuation of the major design project begun in ELEC 421. Project implementation, documentation, and reporting. Normally to be accomplished by students working in the small groups formed in ELEC 421. The impact of the practical, societal, and governmental issues raised in ELEC 421 will be assessed. Each student will make written and oral presentations on their contributions to the project. A prototype demonstration and presentation of final results in a symposium format is required.  
 Lecture: one hour; laboratory: four hours.

- ELEC 423 *Digital Signal Processing* Three Credit Hours  
 Prerequisite: ELEC 309 and ELEC 330  
 Introduction to the characteristics, design, and applications of discrete time systems including discrete time Fourier Transforms, FIR, and IIR Systems. Design of FIR and IIR filters. Design of Chebyshev and Butterworth filters. Introduction to DSP architecture.  
 Lecture: three hours.
- ELEC 424 *Solid-State Devices* Three Credit Hours  
 Prerequisites: PHYS 222/272, MATH 234, and ELEC 306  
 Basic principles governing the operation of solid-state devices are developed from fundamental concepts. P-N junction theory is developed and applied to the analysis of devices such as bipolar transistors, solar cells, detectors, and photo devices. The theory of field-effect devices is developed.  
 Lecture: three hours.
- ELEC 425 *Interference Control in Electronics* Three Credit Hours  
 Prerequisites: ELEC 309 and ELEC 318  
 An introduction to the control and measurement of interference between electronic devices. Analysis methods and practical design techniques to minimize both radiated and conducted emissions and susceptibility will be taught. The course will also cover ways of enhancing signal integrity in high-speed circuits and reducing crosstalk. Laboratory exercises and demonstrations will be used to reinforce the material.  
 Lecture: three hours.
- ELEC 426 *Antennas and Propagation* Three Credit Hours  
 Prerequisite: ELEC 318  
 Transmission, radiation, and propagation of electromagnetic waves by means of transmission lines, waveguides, optical fibers, and antennas.  
 Lecture: three hours.
- ELEC 427 *Energy Systems Engineering* Three Credit Hours  
 Prerequisites: MATH 131 and PHYS 221/271  
 An overview of current and emerging methods of energy conversion used to generate electricity and to support all methods of transportation. This basic look includes study of the thermodynamics, chemistry, flow and transport processes that apply to energy conversion with emphasis on sustainability, efficiency, environmental impact and performance. Systems utilizing fossil fuels, nuclear and renewable resources are studied. Study of energy storage and transmission is included as required to assess both stationary power generation and transportation energy needs.  
 Lecture: three hours.
- ELEC 428 *Computer Architecture* Three Credit Hours  
 Prerequisite: ELEC 330  
 Organization and design of computer system hardware. Provides the basic knowledge required for understanding and designing standard and advanced computer architectures. Topics include: instruction set architectures, ALU design and computer arithmetic, memory organization, cache and virtual memories, controller design, pipelining and parallelism.  
 Lecture: three hours.

ELEC 430 *Independent Research in Electrical Engineering* Three Credit Hours

Prerequisites: Junior or senior standing and department head approval.

This course may be taken by a student wishing to engage in research of mutual interest to the student and to the faculty advisor who directs the study. The student is required to; define a problem, conduct a review of relevant literature, develop an original solution to the problem, perform analysis and design as necessary, and perform experiments or simulations to evaluate the solution. The student is required to consult the faculty advisor in-person at least once per week. The study will culminate in a formal written report, formatted in the style of a published conference-proceedings paper.

ELEC 450 *Electrical Engineering Internship* Three Credit Hours

Prerequisite: Department Head Approval

The student, on an individual basis, pursues advanced understanding by working for an electrical engineering company. The scope of the activities is tailored to the educational focus of the student in consultation with the student's faculty advisor and the supervisor at the company. The student is required to provide weekly journaling, monthly supervisor evaluations, a final presentation, and a final report on the experience. Consultation with the Department Faculty Advisor is required at least once a week on individual work accomplished.

## Department of Mechanical Engineering

Department Head: Rabb

Associate Professors: Bubacz, Rabb

Assistant Professor: Bass, Book, Geathers, Howison, Skenes

Visiting Assistant Professor: Ragan

Instructors: Tobey, Washuta

### Mechanical Engineering Program's Mission Statement

To broadly educate and prepare graduates to become principled mechanical engineering leaders in the global community by instilling the core values of The Citadel, the School of Engineering and the Mechanical Engineering program in a challenging intellectual environment that includes a broad-based, rigorous curriculum, emphasizing theoretical and practical engineering concepts, strong professional values, and a disciplined work ethic.

### Program Educational Objectives

The Mechanical Engineering Program educational objectives prepare graduates to attain:

- Success in the practice of mechanical engineering, by ethically and judiciously applying knowledge of science, mathematics and engineering methods to solve problems facing a technologically complex society.
- Positions to apply and operate current engineering and analysis tools and equipment to conduct and/or lead engineering analysis, design and research.
- Self-Development to value and pursue lifelong learning, not only to keep current in the mechanical engineering field, but also to sustain awareness of engineering-related issues facing contemporary society through formal and informal opportunities.
- Graduate education and/or professional registration as desired or required.
- Roles as principled leaders with strong communications and team-building skills to lead people, manage resources, solve complex problems, communicate information, and influence decisions.

### Program Core Values

The Mechanical Engineering Program has adopted the following core values:

**Students are our Focus:** We believe the education, development, empowerment, and welfare of our students are the primary focus of our efforts.

**Engineers as Principled Leaders:** We believe the engineering profession requires the highest professional and ethical standards, which we seek to model, teach and prepare our students to embrace.

**Collaborative Teaching and Learning Environment:** We believe a collaborative collegial environment among our faculty, staff and students is critical in sustaining advancement in educational excellence.

**Growth through Assessment:** We believe data-driven inquiry and improvement will lead us to sustained advancement in educational excellence.

#### **Program Outcomes**

Students who qualify for graduation with a mechanical engineering major will demonstrate an ability to:

1. apply knowledge of mathematics, science and engineering
2. design and conduct experiments, as well as to analyze and interpret data
3. design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health & safety, manufacturability, and sustainability
4. function on multidisciplinary teams
5. identify, formulate, and solve engineering problems
6. comprehend professional and ethical responsibility
7. communicate effectively
8. comprehend the impact of engineering solutions in a global, economic, environmental, and societal context through a broad education
9. recognize the need for and engage in life-long learning
10. apply knowledge of contemporary issues within solutions
11. use the techniques, skills, and modern engineering tools necessary for engineering practice

#### **Program of Study**

The Mechanical Engineering program will incorporate a number of courses within the existing ABET accredited civil and electrical engineering programs. As shown in the program of study, there will be five main focus areas to meet the needs of the local industry in South Carolina:

1. Manufacturing Engineering – Students acquire knowledge in different manufacturing practices to optimize the processes and systems in a production environment.
2. Composites – Students study composite materials, the principles behind their design, their physical properties, fabrication methods, and application to real-world engineering solutions.
3. Power and Energy – Students learn about energy resources, alternative energy, energy storage, conversion between forms of energy, and energy performance limitations as they apply to satisfying the needs of mankind.
4. Aeronautical Systems – Students study the science and design of fixed wing light systems, aircraft performance and structures.
5. Mechatronics – Students apply skills from mechanical engineering and electrical engineering to enable real-world control of robots, unmanned aerial vehicles, and other autonomous systems.

#### *Fabrication Shop*

The Fabrication Shop is a 1250 square foot facility with a four-axis CNC machine, mill, welding equipment, and other metal working tools. Additionally, there are bandsaws, miter saws, a table saw, sanding station, and various other woodworking tools for student projects and design work.

#### *Project Shop*

The Project Shop is a 750 square foot facility with workspace and storage space for assembly of student projects. It provides a cleaner space for final work.

#### *The Main Computer Lab – LeTellier 203*

LeTellier 203 is the primary teaching and student-use computer facility in the Mechanical Engineering Program. The twenty-four student stations and one projection-capable instructor station and laser printer located in this lab are connected to the campus-wide network, CITnet, and provide direct Internet access via Ethernet. The software in the labs is Windows based. All machines in the lab have graphics-capable WWW browsers. The program's standard general purpose software includes: Microsoft Office, Matlab, and SolidWorks.

#### *Controls and Mechatronics Lab – Grimsley 330*

Grimsley 330 is the primary teaching and student use facility in the Mechatronics focus area of the Mechanical Engineering Program. The room contains twenty-four student workstations or twelve team stations and one instructor station. The software in the room is Windows based. Laboratory equipment consists of standard function generators, oscilloscopes, multimeters, and Feedback instruments for laboratory use and applications.

#### *Materials Testing Laboratory – LeTellier 101*

Major items of equipment include a 250,000 pound and another 300,000 pound concrete cylinder testing machine; 2 each 60,000-pound hydraulic universal testing machines; light microscope; impact tester; hardness tester; grinder/polisher; dual chamber furnace; and equipment for making tension, compression, shearing, and most other accepted and significant tests on metals, ceramics, polymers, and composites.

#### *Fluid Mechanics Laboratory – LeTellier 104*

Equipment is provided for a wide variety of experiments and tests involving the flow of water through pipe networks, meters, and orifices. Other major items of equipment include a head loss and flow measurement fluid circuit apparatus, a Reynolds number device, two (2) hydraulic demonstration units permitting experiments involving many phenomena of open channel flow.

#### *Other engineering equipment*

Adequate equipment is available for the courses in thermo-fluids, machine design, manufacturing, as well as for the other junior and senior courses.

#### *Fundamentals of Engineering Examination*

Each graduating student is required to take the Fundamentals of Engineering (FE) Examination and provide documentation to the program director.

#### *Degree*

The degree of Bachelor of Science in Mechanical Engineering (B.S. M.E.) is awarded to those who successfully complete the program of studies outlined in the courses offerings section of this catalog.

Two humanities or social science electives, one Mechanical elective, one technical elective, and two mechanical engineering Options are required. These are selected from a list of approved electives maintained by the Mechanical Engineering Program. In completing the two humanities or social science electives, the student will

take one from the core curriculum. The other will be a program approved course. The mechanical engineering Options allow the students to specialize in a technical area of mechanical engineering by completing a focus area at the senior level that integrates principles and practices of earlier courses into the application of the engineering system. Students who are on academic probation will not be permitted to enroll in upper level courses offered by the mechanical engineering program (i.e. junior and senior level classes).

### **Minor in Mechanical Engineering (Please refer to p. 149)**

#### **Mechanical Engineering Course Descriptions**

MECH 101 *Introduction to Mechanical Engineering* One Credit Hour  
Required of all Mechanical Engineering freshmen.

The engineering design process is demonstrated through use of practical problem-solving methods for mechanical projects. Course subjects include mechanical engineering career paths, ethical canons of the engineering profession, and requirements for professional licensure. Course assignments, conducted within a collaborative learning environment, focus on creative engineering solutions through technical analysis, teamwork, communication skills, and professionalism. As a foundation for sustained success in mechanical engineering, additional course topics include: lifelong learning, time management, community and professional service, and career development.

Laboratory: 2 hours.

MECH 102 *Engineering Computer Applications* Two Credit Hours  
Required of all Mechanical Engineering freshmen.

Foundations of computing to include software tools and engineering processes for mechanical engineers. Topics may include: structured programming (MATLAB), graphical drawings and 2D and 3D modeling of parts and assemblies. Introduction to teaming and creativity.

Laboratory: 4 hours.

MECH 304 *Engineering Materials w/Lab* Three Credit Hours  
Prerequisites: CIVL 304/307 and CHEM 140 or CHEM 151.

Course explores the relationships between the microscopic structure and macroscopic properties of materials used in engineering applications. The origin of mechanical, electrical, thermal and optical properties is studied. Important material failure modes that occur under fatigue, elevated temperature, rapid loading and corrosive environments are explored. Emphasized is an understanding of the fundamental aspects of atomic and microstructural concepts for proper materials selection, effects of processing on material properties, and enhancement of engineering properties. Materials under study include important metals and alloys as well as key nonmetallic materials such as polymers, ceramics, and composites. Laboratory exercises are integrated throughout the course to provide practical experience in making decisions concerning material composition and processing in order to optimize engineering properties. Experiences from the field are detailed to demonstrate applicability of concepts.

Lecture: 2 hours;

Laboratory: 2 hours.

MECH 310 *Thermal – Fluid Systems I w/Lab* Three Credit Hours

Prerequisites: MATH 132, PHYS 221, PHYS 271;  
Prerequisites or Corequisites: MATH 231, CIVL 203.

Thermal-Fluid System I is an integrated study of fundamental topics in thermodynamics and fluid mechanics. The course introduces conservation principles for mass, energy, and linear momentum as well as the 2nd Law of Thermodynamics. Principles are applied to incompressible flows in pipes and turbomachinery, external flows and power generation systems. A control volume approach to analyze these systems is also introduced. Laboratory exercises are integrated into classroom work.

Lecture: 2 hours.

Laboratory: 2 hours.

MECH 311 *Thermal – Fluid Systems II w/Lab* Three Credit Hours

Prerequisite: MECH 310 with a grade of “C” or higher.

Thermal-Fluid Systems II continues the integrated study of fundamental topics in thermodynamics and fluid mechanics. The course applies conservation principles for mass, energy, and linear momentum as well as the 2nd Law of Thermodynamics. Principles are applied to power generation systems (Rankine, Otto, Diesel, and Brayton cycles), refrigeration cycles, air conditioning processes, internal pipe flows, and aerodynamics. Laboratory exercises are integrated into classroom work. This course includes completion of a comprehensive, out-of-class design problem. This design problem provides the opportunity for students to apply engineering science to the design of a comprehensive thermal-fluid system.

Lecture: 2 hours.

Laboratory: 2 hours.

MECH 325 *Computer Applications w/Lab* Three Credit Hours

Prerequisite: MECH 102

This course uses applied problems in engineering and mathematics to introduce Computer-Aided Drafting (CAD) and numerical problem-solving techniques. Covered topics include creation and editing of 3D parts and assemblies with appropriate design intent, configurations, equation-based modeling, finite element analysis, curve fitting and data analysis, numerical interpolation, integration, root finding, and linear algebraic system solutions.

Lecture: 2 hours.

Laboratory: 2 hours.

MECH 330 *Measurements and Instrumentation w/Lab* Three Credit Hours

Prerequisite: ELEC 201 or ELEC 208

Fundamentals of measurement systems in mechanical engineering including transducer operation, signal conditioning, data reduction, and presentation of results. Transducer and measurement system characteristics including resolution, sensitivity, loading, time response, and frequency response. Operating principles of basic instrumentation for measurement of mechanical quantities such as force, torque, pressure, velocities, accelerations, temperature, and flow. Topics include uncertainty analysis, data analysis, probability and statistics, calibration, data acquisition, presentation of results, and an introduction to experiment design.

Lecture: 2 hours.

Laboratory: 2 hours.



MECH 340 *Manufacturing Processes w/Lab* Three Credit Hours  
Prerequisites: CIVL 304/307.

This is an introductory course that examines the interactions between design and manufacturing from the designer's point of view. The first portion of the class is devoted to safe, hands-on experience with manufacturing machines and equipment. Students will have an opportunity to work on civil and mechanical manufacturing machines that are common in machine, woodworking, and sheet metal shops such as a mill, lathe, grinder, belt sander, drill press, and band saw. Common manufacturing processes will be introduced and design guidelines will be developed for each process. The successful student will leave this class with an appreciation that a designer must consider the method of manufacture during the design process to ensure that a product is functional, economically viable, and safe. Basic principles of metal processing; applied mechanics of metal cutting and forming; cost analysis of manufacturing operations.

Lecture: 2 hours.

Laboratory: 2 hours.

MECH 345 *Machine Design* Three Credit Hours  
Prerequisites: CIVL 304

This course introduces mechanical engineering design as an iterative decision making process and fundamental engineering science applied to machine components. Analysis for the design and manufacture of basic mechanical elements and their role in the design of machines; introduction to failure theory, fatigue analysis, and energy methods for deflection analysis and their application of them to the design and analysis of machine elements; design of multi-component systems. Useful design techniques (such as modeling, CPM, optimization, probabilistic approaches, etc.) and factors influencing design (such as human factors, products liability, ethics, societal, economics, safety, etc.) are presented, discussed, and incorporated. Design against static failure and fatigue failure of structural members and machine parts: design and selection of components including fasteners, shafts, springs, gears, bearings, and chain drives. The course culminates in a team-oriented process, design, and manufacture of a mechanical engineering product using the techniques, tools, machines, and equipment that were developed and taught throughout the course.

Lecture: 3 hours.

MECH 350 *Modeling and Analysis of Dynamic Systems I* Three Credit Hours

Prerequisites: CIVL 203, MECH 330, MATH 234.

This course covers dynamic modeling and control of linear systems through an overview of classical control theory as the foundation for control applications in electrical and mechanical systems. Topics include system modeling using Laplace transform and Root Locus methods. Mathematical models are developed for electrical, mechanical, and other physical control systems. Control systems analysis and design techniques are studied within the context of how each system is physically controlled in practice.

Lecture: 3 hours.

MECH 351 *Modeling and Analysis of Dynamic Systems II w/Lab* Three Credit Hours

Prerequisite: MECH 350.

This course continues the integrated study of controls engineering. Topics include stability, steady state error, transient response, vibrations, sinusoidal frequency analysis, system modeling and design via frequency response methods, state space methods, and introduction to digital control. Laboratory exercises are integrated into classroom work.

Lecture: 2 hours.

Laboratory: 2 hours.

MECH 365 *Computational Methods in Engineering* Three Credit Hours  
Prerequisites: MECH 102.

Prerequisite or corequisite: MATH 234.

An introduction to numerical methods for engineers. Applications include: fluid mechanics, gas dynamics, heat and mass transfer, thermodynamics, vibrations, automatic control systems, and kinematics. Topics include: sources of errors in computing, mathematical bases of numerical methods, and implementation of numerical techniques using MATLAB.

Lecture: 3 hours.

MECH 404 *Advanced Materials* Three Credit Hours

Prerequisite: MECH 304 with a grade of "C" or higher.

Fundamentals of deformation and fracture in metals, polymers, ceramics and composites with application to design. Emphasis on time-temperature dependence of polymers, brittle behavior of advanced ceramics, the fracture mechanics approach to high strength and critical application design, and composite behavior.

Lecture: 3 hours.

MECH 408 *Composite Design* Three Credit Hours

Prerequisite: MECH 304 with a grade of "C" or higher.

Introduces materials and mechanics of composites with emphasis on high performance polymer matrix composites. Topics include material selection, laminate analysis/design, design implications from manufacturing and joining methodology, and interpreting test results. A team design-build project is required.

Lecture: 2 hours.

MECH 409 *Composite Manufacturing w/Lab* Three Credit Hours

Prerequisite: MECH 304 with a grade of "C" or higher.

This course covers manufacturing fundamentals, manufacturing processes, composite fabrication and assembly, quality and inspection methods, repair, and required equipment. Topics include material selection, laminate analysis, manufacturing, joining, and testing.

Lecture: 3 hours.

Laboratory: 2 hours.

MECH 415 *Heat Transfer* Three Credit Hours

Prerequisite: MATH 234, MECH 311.

The three modes of heat transfer (conduction, convection, and radiation) are studied in detail, and applications are made to various engineering components including plane walls, finned surfaces, and tube arrays. The principles of conduction and convection are used to study the design and operation of heat exchangers. Numerical methods are employed to study 2D conduction.

Lecture: 3 hours.

MECH 416 *Mass and Energy Balances* Three Credit Hours

Prerequisite: CHEM 140 or 151.

Introduction to mass and energy balances in single phase and multiphase, non-reactive and reactive systems. Course topics include an introduction to engineering calculations and process variables, use of computers in solving chemical engineering problems, fundamentals of material balances in single-phase and multi-phase systems, energy balances on nonreactive and reactive processes, applications of combined material and energy balances, balances on transient processes, introduction to chemical engineering unit operations, and a general introduction to the field of chemical engineering.

Lecture: 3 hours.

MECH 417 *Renewable Energy* Three Credit Hours

Prerequisite: MECH 310.

Covers renewable energy sources such as solar heating and cooling, wind energy, biomass, and photovoltaic energy. Surveys the energy availability of these sources and life cycle cost and present value used to evaluate the system. Students will design a system which utilizes a renewable energy source and economically evaluate the system.

Lecture: 3 hours

MECH 418 *Energy Conversion Systems w/Lab* Three Credit Hours

Prerequisite: MECH 415 with a grade of "C" or higher.

An overview and historical evolution of both classical and state-of-the-art energy conversion technology. Advanced analysis of energy conversion hardware, air conditioning and refrigeration as well as fossil fuel combustion processes using concepts of energy. Major methods of direct energy conversion are covered, including thermoelectricity, photovoltaics, thermionics, magneto hydrodynamics, and fuel cells. Applications of the thermodynamic, heat transfer, and fluid flow principles to the modeling and design of thermal systems. These systems include pumps, fans, and heat and mass exchangers. The current state of national and world energy is presented and alternatives including renewable energy and a hydrogen economy are explored with reference to economic, political, environmental and technological factors.

Lecture: 2 hours.

Laboratory: 2 hours.

MECH 419 *Mechanical Power Plants* Three Credit Hours

Prerequisite: MECH 311.

Students engage in the analysis, testing and evaluation of internal combustion engines and their subsystems with a view toward understanding the underlying principles which affect their design. Spark ignition and compression ignition engine systems are studied in detail. Steam, cogeneration and combined cycles are studied. Introduces the theory and issues related to the design of axial and radial flow turbines, compressors and pumps.

Lecture: 3 hours.

MECH 420 *Nuclear Reactor Analysis* Three Credit Hours

Prerequisites: MECH 415 with a grade of "C" or higher.

This course focuses on nuclear reactor systems, the release of nuclear energy in the reactor core, and its removal as heat for producing electric power. Specific topics emphasize reactor kinetics, heterogeneous reactors, control rods and shim, reactor poisons, heat transfer, and alternative energy systems. The fundamentals of transport theory and the solution to the transport equation using Monte Carlo N-Particle (MCNPX) transport code are introduced.

Lecture: 3 hours.

MECH 425 *Advanced Heat Transfer* Three Credit Hours

Prerequisite: MECH 415 with a grade of "C" or higher.

This course covers additional topics in conduction, convection and radiation heat transfer as well as mass transfer, phase change and numerical methods.

Lecture: 3 hours.

MECH 426 *Air Conditioning* Three Credit Hours

Prerequisite: MECH 311.

Human comfort and the properties of air. Air conditioning in residences, public and industrial buildings using vapor compression and absorption units. Cooling loads, psychrometry, fans, duct sizing and layout, automatic control, and acoustic design considerations.

Lecture: 3 hours.

MECH 430 *Robotics Engineering w/Lab* Three Credit Hours

Prerequisite: MECH 350.

Interdisciplinary course in engineering systems applied to computer controlled devices. Topics include kinematics, control, operation, sensing, and design as applied to various types of industrial and other robots and programmable manipulators. A related project is required.

Lecture: 2 hours.

Laboratory: 2 hours.

MECH 435 *Finite Elements for Engineering Applications* Three Credit Hours

Prerequisites: CIVL 203, 304, MECH 310.

Emphasizes solving various one-dimensional, transient, non-linear problem statements including heat conduction, beam deflection, convection/diffusion (transport), gas dynamic shocks, and open channel flows. Assesses higher order bases, time stepping procedures, iterative solvers, and finite difference methodologies. Utilizes MATLAB for computational experiments.

Lecture: 3 hours.

MECH 440 *Advanced Manufacturing Processes and their Application* Three Credit Hours

Prerequisites: CIVL 203 and MECH 340 with a grade of "C" or higher.

This course examines major manufacturing processes, their capabilities, analysis, economics and manufacturing process selection. Computer programming is used for iterative methods in both analysis and design. Students will perform analysis in the fields of kinematics, mechanics, fluid mechanics, and heat transfer. The economics of process selection, batch size, and process flow are discussed. Process control methods are introduced.

Lecture: 3 hours.

MECH 445 *Manufacturing Design w/Lab* Three Credit Hours

Prerequisite: MECH 345 and MECH 440.

Applications of fundamentals of engineering mechanics in analysis and synthesis of machine components and systems to the manufacture of products from metals, polymers, ceramics, and composites. Use and management of computers in engineering for drafting, design management, documentation, and manufacturing. Covers drafting methods and standards, design data management, CNC operations, implementation, kinematics, control, operation, sensing, and design as applied to various types of industrial models. A related project is required.

Lecture: 2 hours.

Laboratory: 2 hours.

MECH 450 *Mechatronics w/Lab* Three Credit Hours

Prerequisite: MECH 350.

Applications of microprocessors and microcontrollers and digital electronics to the design and utilization of embedded control systems in smart systems and products. Topics include Boolean logic and algebra, system hardware and software development, and interfacing for mechanical applications.

Lecture: 2 hours.

Laboratory: 2 hours.

MECH 452 *Digital Logic and Circuits w/Lab* Three Credit Hours

Prerequisite: ELEC 201 or ELEC 208

This course covers the analysis, design, simulation, and construction of digital logic circuits and systems. The material in this course provides the necessary tools to design digital hardware circuits such as digital clocks and locks, as well as computer hardware. The course begins with the study of binary and hexadecimal number systems, Boolean algebra, and their application to the design of combinational logic circuits. The first half of the course focuses on designs using small-scale integration (SSI) logic circuits, medium-scale integration (MSI) circuits, and programmable logic devices (PLDs) to implement combinational logic functions. The second half of the course emphasizes sequential logic circuits like counters and sequence recognizers, and also covers memory systems. Laboratory work in this half of the course focuses on using very high speed integrated circuit hardware description language (VHDL) to simulate digital systems and to program those systems into PLDs. As a final project, student teams design, build, and test a digital logic system such as a programmable alarm clock, digital lock, or burglar alarm.

Lecture: 2 hours.

Laboratory: 2 hours.

MECH 455 *Advanced Mechatronics w/Lab* Three Credit Hours

Prerequisite: MECH 450 with a grade of "C" or higher.

A comprehensive course in the field of mechatronics. Mechatronics is the crossroads in engineering where mechanical engineering, electrical engineering, computer science, and controls engineering meet to create new and exciting real-world systems. Knowledge of mechanical and electrical components, controls theory, and design are integrated to solve actual physical design applications.

Lecture: 2 hours.

Laboratory: 2 hours.

MECH 460 *Mechanical Engineering System Design* Three Credit Hours

Corequisite: MECH 345.

This course provides experience in the integration of math, science, and engineering principles leading to a comprehensive engineering design project. Open-ended, client-based design problems emphasize a multidisciplinary approach to total system design providing multiple paths to a number of feasible and acceptable solutions which meet the stated performance requirements. Design teams are required to develop product specifications, generate alternatives through modeling, make practical engineering approximations to include probabilistic approaches, perform appropriate analysis to support the technical feasibility of the design, and make decisions leading to an optimal system design. System integration, reverse engineering/redesign projects, human factors engineering, products liability, ethics, safety, computer-aided design, maintainability, and fabrication techniques are addressed. This course provides an integrative experience in support of the overarching academic program goal.

Lecture: 3 hours.

MECH 470 *Introduction to Applied Aerodynamics* Three Credit Hours

Prerequisite: MECH 311 with a grade of "C" or higher.

The fundamental laws of fluid mechanics are used to develop the characteristic forces and moments generated by the flow about aerodynamic bodies. Physical properties of the standard atmosphere as well as lift, drag, and aerodynamic moments are studied for airfoils (2-D) and finite wings (3-D) in the subsonic and supersonic flow regimes. Students conduct computer simulations throughout the course to observe the physics of actual flows.

Lecture: 3 hours.

MECH 475 *Aircraft Performance and Static Stability* Three Credit Hours

Prerequisite: MECH 470.

The course applies the principles developed in applied aerodynamics to develop the equations of motion for a rigid aircraft in steady state level flight, maneuvering flight, and during takeoff and landing. These equations are analyzed to determine such performance characteristics as maximum range, endurance, turning rate, climb rate, etc. Piston-prop, turbo-prop, and jet aircraft are considered. The equations of motion are then analyzed to develop static stability criteria and investigate steady state control characteristics. Design constraints based on customer requirements, mission profiles, aircraft sizing, optimization, and presentation of performance capabilities are considered.

Lecture: 3 hours.

MECH 476 *Propulsion Systems* Three Credit Hours

Prerequisite: MECH 311 with a grade of "C" or higher.

Application of basic principles in the study of the performance characteristics of air and space vehicles to include the aerodynamics of steady one dimensional isentropic compressible flow. Shock waves, gas turbines, turbojet, turbofan, turbo-prop, turboshaft, ram jet, rocket, nuclear propulsion and space propulsion systems are discussed and compared.

Lecture: 3 hours.

MECH 477 *Vibration Engineering* Three Credit Hours  
Prerequisite: CIVL 203.

In this course students develop a foundation in the analysis and design of free and forced single and multi-degree of freedom systems. Applications include modeling, damping, resonance, force transmissibility, vibration absorbers, matrix formulation and modal analysis. Emphasis is placed on vibration examples from several engineering fields. Out-of-class design problems provide students with the opportunity to apply principles taught in the classroom to realistic problems encountered by practicing engineers. In-class demonstrations supplement the theory development.

Lecture: 3 hours.

MECH 478 *Lightweight Structures* Three Credit Hours  
Prerequisite: CIVL 304/307.

Applies the principles of mechanics to the structural analysis of mechanical and aerospace components. Covers stress tensors, shear flow in open and closed sections, beam columns, asymmetrical bending, Castigliano's theorem, statically indeterminate structures, thin walled pressure vessels, introduction to elasticity.

Lecture: 3 hours.

MECH 481 *Senior Design I* Three Credit Hours  
Prerequisite: MECH 345, MECH 460.

Design projects with industry. Students work in teams with three or four members on design projects furnished from external clients. The emphasis is on creating design solutions, with appropriate analyses, to meet stakeholders' needs. In addition to regular meetings with their faculty advisors, the teams are expected to maintain close and continuous communications with their clients during the semester. The projects culminate in oral presentations and Interim Written Reports which are submitted to the clients.

Lecture: 2 hour  
Laboratory: 2 hours.

MECH 482 *Senior Design II* Three Credit Hours  
Prerequisite: MECH 481.

This course is a continuation of MECH 481. The student teams continue their design solutions to a general problem furnished by an external client. Continuous and regular communication with the outside clients is expected, as well as with the faculty advisors. During this semester the teams continue refining their solutions, complete the detail design, make oral presentations of the final design, and complete and submit the Final Written Report.

Lecture: 1 hour  
Laboratory: 4 hours.

MECH 497 *Special Topics in Mechanical Engineering* Three Credit Hours

Prerequisite: Department Head approval.

This course provides in-depth study of a special topic in engineering mechanics or mechanical engineering not offered elsewhere in the curriculum. Course content will be based on the special expertise of the Visiting Professor or a senior mechanical engineering faculty member.

MECH 498 *Mechanical Engineering Internship* Three Credit Hours  
Prerequisite: Department Head approval.

The student, on an individual basis, pursues advanced understanding by working for a mechanical engineering company. The scope of the activities is tailored to the educational focus of the student in consultation with the faculty advisor and the supervisor at the company. The student is required to provide weekly journaling, monthly supervisor evaluations, a final presentation, and a final report on the experience. LESSONS and LABS: No formal class. Consultation with Department Faculty Advisor at least once a week on individual work accomplished.

MECH 499 *Advanced Independent Study in Mechanical Engineering* Three Credit Hours

Prerequisite: Department Head approval.

Other requirements as determined by Faculty Advisor.

The student, on an individual or small group basis, pursues advanced study of a research topic in mechanical engineering. The scope of the course is tailored to the desires of the student in consultation with his faculty advisor. The student is required to define and analyze the problem, study the fundamentals involved, organize the approach, determine the procedure, achieve a solution, and submit a written report. LESSONS and LABS: No formal class. Consultation with Department Faculty Advisor at least once a week on individual work required.

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## Department of Engineering Leadership and Program Management

The Citadel Department of Engineering Leadership and Program Management offers one undergraduate course:

PMGT 401 *Project Management Career Skills* Three Credit Hours  
Prerequisite: Good academic standing, Juniors or Seniors

This course is designed to develop career enhancing professional skills through introduction to the lifecycle of Technical Project Management. This course provides the student with fundamental techniques and principles related to project management, following the national standards for project management. Specific areas of focus will be Project Integration, Planning, Scheduling, Quality, Risk, and Stakeholder Management. The essential role of project leadership will be emphasized.

# SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

**Col. Winfred Bobo Moore, Jr., Dean**

**Department of Criminal Justice  
Lt. Col. Sean Griffin, Head**

**Department of English, Fine Arts,  
and Communications  
Col. Scott Lucas, Head**

**Department of History  
Col. Joelle Neulander, Head**

**Department of Intelligence and Security Studies  
Lt. Col. Carl Jensen, Head**

**Department of Modern Languages, Literatures  
and Cultures  
Col. Guy David Toubiana, Head**

**Department of Political Science  
Col. DuBose Kapeluck, Head**

**Department of Psychology  
Col. Lloyd A. Taylor, Head**

## Department of Criminal Justice

Department Head: Griffin

Professors: Griffin, McNamara

Associate Professor: Zommer

Assistant Professors: Fenoff, Fisher, Hefner, Hill, Navarro, Norris

The major affords students an opportunity to obtain a broad liberal arts education that enriches their lives and provides preparation for graduate education and for useful and satisfying careers.

The course of study for students majoring in criminal justice prescribes a set of core courses to introduce the student to the discipline. In addition, students have the opportunity to select from two clusters of courses including advanced criminal justice coursework and courses in the related disciplines of political science and sociology that provide a broader liberal arts perspective. The major is designed to offer opportunities for criminal justice education at the college level which will provide capable personnel to meet the professional needs of the regional and national criminal justice community. The degree program offers a liberal arts approach which emphasizes social and natural sciences as well as humanities and professional activities. Students who major in criminal justice anticipate careers at the local, state, and national levels in such areas as law enforcement, juvenile justice, corrections, courts, probation and parole. The major also offers an excellent background for pre-law students through its courses in criminal law, evidence, courts, and criminal justice procedures and processes.

**Other Programs and Courses:** The Department offers three minors: Criminal Justice, Intelligence and Homeland Security, and International Criminal Justice. The Department also participates in the college's interdisciplinary minors in African-American Studies, International and Military Affairs, Law and Legal Studies, and Non-Western Studies. For a full description of these minor programs, please refer to the appropriate entries in this catalog: Department of History - African-American Studies; Department of Political Science - International and Military Affairs, Law and Legal Studies, and Non-Western Studies. The Department also offers one course (SOCI 201: Introduction to Sociology) which may satisfy the core curriculum's social science requirement in many majors.

**Major Requirements: B.A. in Criminal Justice**

The criminal justice major consists of fifteen courses (45 credit hours) within the department. In addition, the major establishes certain distributional requirements outside the department, and it provides for six elective courses which students may use as they choose. The complete course of study is presented in the Courses of Study section of this catalog.

The criminal justice core curriculum consists of four courses (12 credit hours) to broadly introduce the student to the field. These core courses for the major are as follows:

*Required Courses*

CRMJ 201	Introduction to Criminal Justice
CRMJ 202	Criminology
CRMJ 370	Police Systems and Practices
CRMJ 380	Corrections

Beyond the core courses, each student majoring in criminal justice must choose 11 additional courses (33 credit hours) to be distributed among two clusters of courses, for a total of 45 credit hours. Courses have been clustered as follows: Cluster A (8 courses, 24 credit hours) includes advanced criminal justice coursework; Cluster B (3 courses, 9 credit hours) includes criminal justice-related/collateral courses. (General Electives, which may also be selected from our criminal justice offerings, may take the total higher at the student's discretion.) The courses offered in each cluster are as follows:

*Cluster A* (Any 8 CRMJ 300- or 400-level advanced courses beyond the core requirement, 24 credit hours):

CRMJ 330	Emergency Management
CRMJ 331	Cyber Investigations
CRMJ 332	Comparative Counter-Terrorism
CRMJ 333	Immigration and Security
CRMJ 360	Latin American Insurgencies
CRMJ 371	Criminal Law
CRMJ 372	Critical Issues in Law Enforcement
CRMJ 373	Criminal Evidence
CRMJ 375	Criminal Justice Agency Administration
CRMJ 381	Organized Crime
CRMJ 382	Drugs and Crime
CRMJ 383	Comparative Criminal Justice Systems
CRMJ 384	International Crime
CRMJ 385	Juvenile Delinquency
CRMJ 386	Research Methods in Criminal Justice

CRMJ 387	Criminal Investigation
CRMJ 388	White Collar Crime
CRMJ 389	Criminal Justice in Latin America
CRMJ 390	Victimology
CRMJ 391	Criminalistics
CRMJ 392	Computer Crime
CRMJ 393	Homicide
CRMJ 465	Special Topics in Criminal Justice
CRMJ 470	Ethics
CRMJ 471	Psychology of Crime
CRMJ 472	Crime Prevention
CRMJ 473	Biology and Crime
CRMJ 498	Independent Study
CRMJ 499	Internship
INTL 210	Homeland Security
INTL 310	Intelligence Collection Systems and Programs
INTL 311	US Intelligence Successes and Failures
FNAR 307	Digital Forensic Photography

*Cluster B* (3 courses, 9 credit hours): Choose three courses numbered 200 or above in any combination of the following disciplines: Anthropology, History, Philosophy, Political Science, Psychology, or Sociology. Additionally, CSCI 227 (Principles and Practices of Cybersecurity) and one Modern Language 301 course (FREN 301, GERM 301, or SPAN 301) may be taken as Cluster B courses. Also, if not taken as a Cluster A course, FNAR 307 (Digital Forensic Photography) may be taken as a Cluster B course.

**B.A. in Intelligence and Security Studies**

The Bachelor of Arts (BA) in Intelligence and Security Studies (ISS) is designed to meet the national security and intelligence needs of military, federal, state, and local governmental agencies, private corporations engaged in intelligence and security fields, and others who are interested in gaining greater knowledge about the field of intelligence and security studies. The BA consists of 15 courses (45 credit hours) offered by the Department of Criminal Justice and other academic units at The Citadel. In order to provide students with a broad-based liberal arts education, the major is highly interdisciplinary.

Students must choose from one of the following concentration areas:

- Military Intelligence
- Chinese Area Studies
- Counterterrorism
- Business Intelligence
- General Intelligence

**Minor in Criminal Justice  
(Please refer to p. 131)**

**Minor in International Criminal Justice  
(Please refer to p. 143)**

**Minor in Law and Legal Studies  
(Please refer to p. 146)**

**Criminal Justice Course Descriptions**

CRMJ 201 *Introduction to Criminal Justice* Three Credit Hours

An introduction to the American criminal justice system, including the history and philosophy of law enforcement, the nature of crime in the United States, an introduction to the substantive criminal law, the nature and theory of the criminal justice process from arrest to corrections, and the roles of the major actors in that process (police, prosecutors, defense lawyers, judges, and corrections personnel).

CRMJ 202 *Criminology* Three Credit Hours

A study of the theories that seek to explain criminal behavior.

CRMJ 330 *Emergency Management* Three Credit Hours

This course examines the history and perspectives of the field, hazards concepts and taxonomies, all-hazards approach, phases of emergency management, risk assessment, risk communication, emergency management functions, sustainable development, best practices, the model EOC, the written and implemented disaster plan, attaining the CEM, IAEM, and forging intra- and inter-government relationships.

CRMJ 331 *Cyber Investigations* Three Credit Hours

This course will introduce the student to the best practices for seizing and securing digital evidence and the complicated legal issues surrounding digital evidence within the area of Cyber-Crime Investigation to include Cyber-Terrorism. The course will cover evidence and issues relative to file Meta-data for various types of electronic devices such as computer networks, cell phones, and electronic storage. Searches justified by exigent circumstances, search incident to arrest, and search warrant issues will also be covered. This course provides students interested in improving their investigative knowledge with an understanding of identifying, quantifying/qualifying, seizing, and protecting electronic information.

The investigative process is studied from basic theoretical concepts to the application of the basic elements for prosecution of criminal cases. Included are several studies of electronic crime scene investigation, white collar crime, organized crime, and cyber-terrorism. While this class focuses on cyber investigative practices and procedures in the United States, it offers a global perspective and will incorporate examples from different parts of the world.

CRMJ 332 *Comparative Counter-Terrorism* Three Credit Hours

This course examines how democracies and non-democracies have responded to terrorism. Comparative policies addressed will include surveillance, detention of terrorist suspects, counter-terrorism laws and judicial proceedings, government oversight and transparency, and transnational law enforcement, military and intelligence cooperation. Nations analyzed for comparative purpose include (but are not limited to): Israel, United Kingdom, Australia, India, Germany, France, Russia, China, Indonesia and Canada. The objective of this course is to be able to make counter-terrorism policy recommendations for the United States based on the practice of other nations.

CRMJ 333 *Immigration and Security* Three Credit Hours

Immigration is defined as crossing the border of one of the world's 220 nation states with the intent to stay. Technological improvements in the last 50 years have given rise to massive outflows of people from sending countries and have tested the capacity of receiving countries to absorb immigrants. This course examines security issues such as terrorism that might stem from countries' inability to control borders and the separate issue of societal security. Special emphasis is given to Mexican immigration to the US.

CRMJ 360 *Latin American Insurgencies* Three Credit Hours

This course presents in-depth case studies of insurgencies in Peru, Guatemala, and Colombia. The Peruvian state fought the Shining Path led by the messianic Abimael Gusman from 1980 until his capture in 1992. Guatemala suffered a festering civil war from 1960 until peace accords with the Guerilla Army of the Poo (EGP) in 1996. Initially, combat took place in *mestizo*-dominated eastern Guatemala, but by the 1980s the conflict had moved to the northern Ixil indigenous highlands. Colombia has been in a state of civil war since the formation of the FARC in 1966. The Colombian case was complicated by the presence of drug traffickers and paramilitaries along with insurgents. The course will tangentially consider the civil war in El Salvador from 1980-1992.

CRMJ 370 *Police Systems & Practices* Three Credit Hours

An introduction to law enforcement in the United States, including a brief history of policing, contemporary trends in criminality, and current issues facing police administrators. Attention will also be given to the Fourth, Fifth, and Sixth Amendments to the U.S. Constitution and their implications for law enforcement.

CRMJ 371 *Criminal Law* Three Credit Hours

This course examines the origin and general principles of criminal law, principles of criminal liability, and elements of offenses.

CRMJ 372 *Critical Issues in Law Enforcement* Three Credit Hours

A critical analysis of contemporary issues in the law enforcement community, including the following: police stress, use of deadly force, police brutality, corruption, unionization, substance abuse by police officers, and other issues currently confronting law enforcement administrators and policymakers.

CRMJ 373 *Criminal Evidence* Three Credit Hours

An introduction to the types of evidence, collection of evidence, the chain of custody, and procedures relating to its introduction into judicial proceedings. Special attention is given to Fourth Amendment constitutional issues.

CRMJ 375 *Criminal Justice Agency Administration* Three Credit Hours

An introduction to criminal justice agency administration, including the following: the nature of criminal justice organizations, criminal justice personnel, group behavior in criminal justice organizations, and processes in criminal justice organizations.

CRMJ 380 *Corrections* Three Credit Hours

An introduction to corrections, correctional theory, and correction policy through the in-depth study of key areas in corrections, including correctional history, systems, policy, treatment programs, prison life, community-based corrections, probation and parole, and juvenile corrections.

CRMJ 381 *Organized Crime* Three Credit Hours

An examination and analysis of organized crime, of controversies surrounding the phenomenon, and of efforts aimed at its control. Attention will be given to defining organized crime, to its development, and to various theories that seek to explain its existence. Other topics include the activities that constitute the business of organized crime, the relationship between organized crime and corruption of governmental officials, the techniques used to control it, and the policy implications inherent in responses to organized crime.

CRMJ 382 *Drugs and Crime* Three Credit Hours

An examination of drug use as it relates to addiction, social problems, crime, enforcement, and treatment. Issues involving domestic and international drug supply, demand, trafficking, and interdiction are studied in the context of American drug policy.

CRMJ 383 *Comparative Criminal Justice Systems* Three Credit Hours

An examination of the ideology, structure, and justice process of various criminal justice systems in the United States, Europe, Asia, Africa, the Middle East, and Latin America. The comparative study involves analysis of diverse social control, legal, police, court, correction, and juvenile systems from representative justice approaches around the world, as well as normative values, practices, and ethics of justice system practitioners.

CRMJ 384 *International Crime* Three Credit Hours

A study of transnational crime, criminals, and criminal organizations in a global context including an examination of international and national organizations, laws, and justice practices responsible for controlling multi-national criminal activity.

CRMJ 385 *Juvenile Delinquency* Three Credit Hours

An introduction to delinquency, to the juvenile justice process from intake to disposition, to trends in the treatment of juvenile offenders, and to juvenile justice reform (decriminalization, diversion, deinstitutionalization, and due process).

CRMJ 386 *Research Methods in Criminal Justice* Three Credit Hours

An introduction to research and to statistical methods, data bases, and computer applications in relation to the various fields of criminal justice. Special attention will be given to the problems associated with collection and analysis of criminal justice data.

CRMJ 387 *Criminal Investigation* Three Credit Hours

An examination of the criminal investigation process that combines forensic applications with investigative procedures. Crime scene preservation, management, evidence collection, and process are included in the examination of the investigative process. Interrogation and interviewing techniques, as well as physical evidence used to investigate specific types of offenses, are studied emphasizing effective case prosecution.

CRMJ 388 *White Collar Crime* Three Credit Hours

A study of "white collar" crime as a specific type of deviance. The course explores aspects of organizational, corporate, occupational, and governmental criminality and its detection, investigation, prosecution, and punishment.

CRMJ 389 *Criminal Justice in Latin America* Three Credit Hours

Latin American countries have criminal justice institutions based on fundamental principles similar to those of US criminal justice institutions: due process, substantive criminal and criminal procedural law, basic organization into police, courts and corrections sectors, written constitutions, etc. Yet Latin American criminal justice institutions often in practice function very differently from those in the US. This course presents case studies on Latin American criminal justice institutions with topics including police reform in Bolivia; use of the National Guard in counter-narcotics in Puerto Rico; judicial police reform in Mexico; prosecutorial reform in Guatemala; and others.

CRMJ 390 *Victimology* Three Credit Hours

The scientific study of the extent, nature, and causes of criminal victimization, its consequences for the persons involved and the reactions to such victimization by society, in particular the police and the criminal justice system. Additional areas of examination include history of victimology, legal recourse for crime victims, and informal methods of addressing the needs of victims.

CRMJ 391 *Criminalistics* Three Credit Hours

The application of science to the investigation of crime. Designed to acquaint non-science majors with the philosophy and methodology of dealing with physical evidence in criminal investigation.



CRMJ 392 *Computer Crime* Three Credit Hours

An exploration of the current state of computer crime in the United States. The course traces the history of technological crime and identifies areas ripe for exploitation from technology savvy deviants. It also evaluates forensic practices and software in light of government legislation together with an analysis of emerging case law. The course also addresses guidelines for the development of computer forensic laboratories, the creation of computer crime task forces, and the search and seizure of electronic equipment.

CRMJ 393 *Homicide* Three Credit Hours

This course is designed to teach students about homicide through a scholarly and sociological examination of the crime and those who commit such acts. Topics will range from traditional homicides to multiple victim homicides, including spree, mass, and serial killings. Special attention will be paid to the statistical, legal, and psychological elements of homicide in the United States.

CRMJ 465 *Special Topics in Criminal Justice* Three Credit Hours

An advanced seminar designed to examine in-depth selected topics in criminal justice.

CRMJ 470 *Ethics* Three Credit Hours

This course seeks to examine the criminal justice system through an ethical lens, to identify ethical issues in practice and in theory, to explore ethical dilemmas, and to suggest how ethical issues and dilemmas faced by criminal justice professionals might be resolved.

CRMJ 471 *Psychology of Crime* Three Credit Hours

This course examines the role of psychology in contributing to our understanding of criminal behavior and criminal justice system processes. The course will review our current understanding of the criminal mind and the psychological explanations associated with the commission of violent crime, homicide, sexual assault, multiple murder, terrorism, property crime, and substance abuse. The course takes a close look at developmental risk factors and the biological origins of criminal behavior. Toward the end of the semester, the course discusses the use of psychological principles in police interrogations, the court process, and correctional psychology.

CRMJ 472 *Crime Prevention* Three Credit Hours

This course will examine how to prevent crime from humanistic, structural, situational and environmental perspectives. A basic introduction to each of these schools of thought will be given. The main focus of this course will be examining the empirical research surrounding each method.

CRMJ 473 *Biology and Crime* Three Credit Hours

The nature versus nurture debate has affected those who write about crime and its causes since the mid-19<sup>th</sup> century. Crime is defined as deviant behavior, and social scientists have alternately sought to identify the causes of individual criminality in biological or sociological factors. This course considers the relative contributions of biological and sociological factors to individual criminality

in light of the findings of twins studies, adoption studies and other scholarship through the 21<sup>st</sup> century.

CRMJ 498 *Independent Study* Three Credit Hours

An independent research project resulting in a formal paper, this study must be approved by the department head in consultation with an appropriate member of the faculty who will supervise the project. Virtually any aspect of criminal justice may be investigated. Especially recommended for those considering graduate or professional study.

CRMJ 499 *Internship* Three Credit Hours

Prerequisite: Permission of Department Head.

Internships with government and other agencies are offered to combine academic training with professional experience.

### Sociology Course Descriptions

SOCJ 201 *Introduction to Sociology* Three Credit Hours

Satisfies the Core Social Science Requirement.

The scientific study of principles and comparisons in society and culture as these relate to population and communities, behavior systems, group collectivity and structure, social change, and institutions.

SOCJ 202 *Social Problems* Three Credit Hours

Analysis of deviant behavior and those factors affecting the disorganization of small groups, complex organizations, and societies.

SOCJ 301 *Cults* Three Credit Hours

An examination and analysis of alternative religious ideologies and groups. Attention will be given to defining and explaining cults, and a historical analysis of the phenomenon will be undertaken. A sociological examination of their impact on social norms and ideologies will be discussed; government reactions to cults and cult activities will also be addressed.

SOCJ 304 *Minority Group Relations* Three Credit Hours

An examination of the substantive issues in the study of majority-minority group relations and social processes, and the cultural orientations which are associated with these issues.

SOCJ 433 *Special Topics in Sociology* Three Credit Hours

Selected special topics or problems in the general area of sociology and social problems; offered periodically as the special interests of faculty and students permit.

SOCI 498 *Independent Study* Three Credit Hours

An independent study project resulting in a formal paper; this study must be approved by the department head in consultation with an appropriate member of the Sociology faculty who will supervise the project. Especially recommended for those considering graduate or professional study.

An introduction to archaeology which looks at kinds of prehistoric data and the methods used to obtain and interpret it. Attention will center upon the lives of hunters, food producers, and early community settlements.

## Department of English, Fine Arts, and Communications

Department Head: Lucas

Professors: Allen, Heuston, Horan, Hutchisson, Leonard, Livingston, Lucas, Thompson

Associate Professors: Frame, Hendriks, Maxwell, Pilhuj

Assistant Professors: Eggleston

Senior Instructors: Silverman

Instructor: Adair

Visiting Instructors: Free, Sargent, Spring

Courses in English composition and literature are required for all freshmen and sophomores, regardless of their major fields of study.

Advanced standing with credits may be given to students who complete the College Entrance Examination Board Advanced Placement Test in English with a grade of three or better.

### The English Major

The English major is designed for students seeking a broad education suitable for careers in such areas as law, business, the ministry, or the armed forces. As a pre-professional degree, English challenges students to think critically and to improve their communication skills.

Course offerings cover the range of literature written in English, from the Middle Ages to our own times. The department also offers classes in creative writing, art, music, and philosophy. In preparing for careers after graduation, every student majoring in English completes at least one advanced writing class and at least one internship in professional communications.

The English major consists of twelve courses (36 credit hours). With a course of studies featuring eleven general electives, students majoring in English have the flexibility to complete a minor in a complementary field.

The student majoring in English is required to take the following courses:

English 211 (Mythology), 212 (The Bible as Literature), or

Philosophy 201 (Introduction to Philosophy)

English 216 (Literary Theory)

English 303 or 304 (Shakespeare I or II)

English 402 or 403 (Senior Seminar I or II)

English 411 (Legal Writing) or Communications 413 (Advanced

Composition)

Communications 499 (Internship in Professional Communications)

A Fine Arts class (see the list of choices on pp. 131-132)

Five additional upper-level English courses (numbered 301 and above).

The complete course of study for the major in English can be found on pp. 190-191.

**Minor in English**  
(Please refer to p. 136)

**Minor in Fine Arts**  
(Please refer to p. 137)

**Minor in Philosophy**  
(Please refer to p. 153)

**English Course Descriptions**

ENGL 101 & 102 *Composition and Literature I & II* Three Credit Hours  
Each Semester

Required of all freshmen.

The development of the basic skills of writing, reading, and analysis through the study of literary types. ENGL 101: Reading and evaluating essays; writing paragraphs and essays, including a research paper. ENGL 102: Writing essays on topics pertaining to selected works of literature, film, and related imaginative genres. ENGL 101 is graded on a scale of A, B, C, U. A student must earn a "C" or higher in ENGL 101 before taking ENGL 102.

International students whose native language is not English may be placed in a special English as a Second Language (ESL) section of ENGL 101. Depending on the individual ESL student's performance in English, he or she may be required to take a second class, ENGL 111: English Composition for International Students, before progressing to ENGL 102.

ENGL 111 *English Composition for International Students* Three Credit Hours

This course, a continuation of the English as a Second Language ENGL 101, provides additional practice in English grammar and vocabulary while developing the student's skills in English composition and reading comprehension. May be taken for General Elective credit only.

ENGL 201 & ENGL 202 *Major British Writers I & II* Three Credit Hours  
Each Semester

Prerequisites: ENGL 101 and ENGL 102

Study in depth of major writers in British literature from the medieval period to the present. ENGL 201: *Beowulf*, Chaucer, Shakespeare, Milton, Pope, and Swift. ENGL 202: Wordsworth, Keats, Tennyson, Browning, Hardy, Yeats, and Eliot. Several themes assigned on the literature studied.

ENGL 208 *Humanities Special Topic* Three Credit Hours  
Prerequisite: ENGL 102

A study of a particular aspect of literature, communications, or a related area.

ENGL 209 *Introduction to Film* Three Credit Hours  
Prerequisite: ENGL 102

An introduction to the aesthetics and techniques of cinematic art.

ENGL 210 *The Literature of War* Three Credit Hours  
Prerequisite: ENGL 102

A study of selected literature about war, to include the historical background of the literature and ways in which it reflects the attitudes of the authors and of the societies which produced it. The approach of the course will be general and is intended to appeal to a wide audience of students.

ENGL 211 *Mythology* Three Credit Hours  
Prerequisite: ENGL 102

A study of mythology including Greco-Roman, Northern European, Native American and Eastern myths. A discussion of the leading theories concerning the origins, development, and significance of myths together with the allusive and allegorical use of myth in later literature and art.

ENGL 212 *The Bible as Literature* Three Credit Hours  
Prerequisite: ENGL 102

A study of selected portions of the Old and New Testaments as literary masterpieces and cultural monuments, with some attention to the major systems of interpretation.

ENGL 215 *Masterpieces of American Literature* Three Credit Hours  
Prerequisite: ENGL 101 and ENGL 102

A survey of representative works of American literature from its beginning to the present, with some consideration of principal literary developments and historical issues. Authors may include Franklin, Emerson, Melville, Dickinson, Twain, James, Hemingway, Faulkner, O'Neill, Frost, Stevens, Hurston, O'Connor, and Rich.

ENGL 216 *Literary Theory* Three Credit Hours  
Prerequisite: ENGL 102

A study of literary criticism from ancient Greece to the present, emphasizing the relation of the critical tradition to contemporary critical approaches to literature. Special attention to semiotic theory as it relates to the influence of

language and visual images on thinking, composing, and action.

ENGL 218 *Masterpieces of World Literature I* Three Credit Hours

Prerequisite: ENGL 101 and ENGL 102

Study of works of world literature to 1650, both western and non-western, from major cultural centers such as ancient Greece, Rome, and India; Medieval Europe; Tang China; and Heian Japan. Readings will include epics, plays, and lyric poems.

ENGL 219 *Masterpieces of World Literature II* Three Credit Hours

Prerequisite: ENGL 101 and ENGL 102

A survey of world literature (in translation) from 1650 to the present, with emphasis on both non-English European works and works written outside the Western tradition. The periods and topics covered will include the Enlightenment of the 17th and 18th centuries, European Romanticism and Realism of the 19th century, and developments in the literatures of Africa, India, Japan, China, and South America in the 20th century. Readings will include drama, poetry, and prose fiction.

ENGL 221 *Introduction to Creative Writing* Three Credit Hours

Prerequisite: ENGL 102

An introduction to a wide variety of creative writing forms, including the writing of short stories, screenwriting, memoir, poetry, and drama.

ENGL 222 *Special Topics in Film Studies* Three Credit Hours

Prerequisite: ENGL 102

A study of a particular aspect or genre of film.

ENGL 301 *Chaucer* Three Credit Hours

Prerequisite: Completion of core requirements in English.

An introduction to Chaucer's language, art, and cultural milieu through readings of *The Canterbury Tales*, *Troilus and Criseyde*, and some of the shorter poems.

ENGL 303 & ENGL 304 *Shakespeare I & II* Three Credit Hours  
Each Semester

Prerequisite: Completion of core requirements in English.

Each course will present students with different but representative selections from the comedies, histories, and tragedies. Since the courses will not overlap, students may take both.

ENGL 305 *Milton* Three Credit Hours

Prerequisite: Completion of core requirements in English.

A study of *Paradise Lost*, *Samson Agonistes*, and representative prose works, with special attention to their philosophical content.

ENGL 310 *Literature of Medieval England* Three Credit Hours

Prerequisite: Completion of core requirements in English.

A survey of the most important literature composed during the Old English and Middle English periods, exclusive of Chaucer. Some works will be read in the original languages, some in translation.

ENGL 320 *Sixteenth Century Poetry and Prose* Three Credit Hours

Prerequisite: Completion of core requirements in English.

A study of the principal English writers of the period, with particular emphasis on the prominent aspects of the Renaissance spirit.

ENGL 321 *Seventeenth Century Poetry and Prose* Three Credit Hours

Prerequisite: Completion of core requirements in English.

A study of representative prose prior to the Restoration, of representative poetry of Ben Jonson and his "sons," and of John Donne and the metaphysical poets.

ENGL 322 *English Drama to 1642* Three Credit Hours

Prerequisite: Completion of core requirements in English.

A study of representative plays, exclusive of Shakespeare's, from the medieval beginnings of English drama to the closing of the theatres in 1642.

ENGL 323 *Restoration and Early Eighteenth Century Literature* Three Credit Hours

Prerequisite: Completion of core requirements in English.

A study of the new spirit of English prose, poetry, and drama which came with the Restoration. Some emphasis will be given to the philosophical, religious, political, and social backgrounds.

ENGL 324 *The Age of Johnson* Three Credit Hours

Prerequisite: Completion of core requirements in English.

A study of the decline of Neoclassicism and the movement toward Romanticism in the poetry, fiction, drama, and nonfiction prose of the age.

ENGL 325 *The Romantic Movement* Three Credit Hours

Prerequisite: Completion of core requirements in English.

A study of the chief features which culminated in the Romanticism of the nineteenth century, with special emphasis on the five major poets: Wordsworth, Coleridge, Byron, Shelley, and Keats.

ENGL 326 *Victorian Poetry and Prose* Three Credit Hours

Prerequisite: Completion of core requirements in English.

A study of the period from 1830 to 1900, showing the effects of the Industrial and Scientific Revolutions on traditional attitudes toward art and life through the works of the major writers of the period, with emphasis upon the poetry of Tennyson, Browning, Arnold, and Hopkins; and upon the prose of Carlyle, Arnold, Mill, and Ruskin.

ENGL 327 *Nineteenth Century British Novel* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

A study of selected works of major nineteenth century British novelists such as Austen, Scott, the Brontes, Thackeray, Dickens, Eliot, Trollope, and Hardy.

ENGL 332 *Twentieth Century British Fiction* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

A course in the reading and critical analysis of selected British novels by writers like Conrad, Joyce, Lawrence, Forster, Woolf, and Waugh.

ENGL 336 *Twentieth Century British Poetry* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

A study of British poets from the 1890s until the present, with an emphasis on the work of Hopkins, Hardy, the poets of the First World War, Yeats, Thomas, and Auden.

ENGL 338 *African American Literature to 1940* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

A survey of African American poetry, drama, fiction, and nonfiction from the beginnings of the literary tradition through 1940, with emphasis on such genres and movements as the slave narrative, dialect literature, racial polemic, and the Harlem Renaissance. Authors studied will include Wheatley, Douglass, Harper, Du Bois, Chesnutt, Larsen, Hurston, and Hughes.

ENGL 339 *African American Literature 1940-Present* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

A survey of African American poetry, drama, fiction, and nonfiction from 1940 to the present, with emphasis on significant literary developments such as the Protest Movement, the Black Arts Movement, Neorealism, and the New Black Aesthetic. Authors studied will include Wright, Ellison, Hansberry, Angelou, Walker, Wilson, Morrison, and Shange.

ENGL 340 *Southern Literature to 1900* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

A survey of the literary achievement of Southern writers from 1710 to 1900.

ENGL 341 *Early American Literature* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

A study of American writings from the time of the first settlement through the colonial period, ending with early nationalism.

ENGL 342 *American Romantic Literature* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

A study of American authors from the period of the establishment of a national literature. The course includes such writers as Hawthorne, Poe, Melville, Emerson, Thoreau, and Whitman.

ENGL 343 *Literature of American Realism* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

A study of American literature following the Civil War and up to the twentieth century. The course includes local colorists and such writers as Dickinson, Twain, James, and Crane.

ENGL 346 *Twentieth Century American Fiction* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

A study of major American fiction since 1900. Authors studied may include Fitzgerald, Hemingway, Faulkner, Stein, Mailer, Styron, Pynchon, and Morrison.

ENGL 348 *Twentieth Century Southern Literature* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

A study of the most important Southern authors of the twentieth century, with emphasis on significant regional topics such as the Fugitive and Agrarian Movements, the development of the Southern Tradition, and the Southern Gothic School.

ENGL 350 *Twentieth Century American Poetry* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

A survey of American poetry since 1900. The course will cover such poets as Robinson, Frost, Eliot, Stevens, Pound, Williams, Hughes, Moore, Bishop, Ginsberg, Rich, and Dove.

ENGL 351 *Twentieth Century American Drama* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

A survey of major dramatists and dramatic developments of the American Theatre since 1900. The course will cover such playwrights as Belasco, O'Neill, Miller, Williams, Albee, Hansberry, Shepard, Wilson, and Mamet.

ENGL 360, ENGL 362, *A Survey of World Literature I, II, & III* Three Credit Hours  
& ENGL 364 Each Semester

Prerequisite: Completion of core requirements in English.

Masterpieces of world literature in translation, including non-Western literature, with special attention to the philosophical content and development of literary forms. ENGL 360: From the *Rig Veda* to Dante. ENGL 362: From Boccaccio through the nineteenth century. ENGL 364: Twentieth century.

ENGL 368 *Twentieth Century Drama* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

Representative plays of the twentieth century, with emphasis on European and non-Western works.

ENGL 370 *Adolescent Literature* Three Credit Hours  
Prerequisite: Completion of core requirements in English.

A study of literature for the adolescent, including methods of introducing the major literary genres to the secondary-school student.

- ENGL 371 *Literary Paradigms of Leadership* Three Credit Hours  
Prerequisite: Completion of core requirements in English.  
A study of literary texts from various times and cultures that present models of leadership, both good and bad, and raise issues about leadership characteristics and responsibilities.
- ENGL 372 *Film Studies* Three Credit Hours  
Prerequisite: Completion of core requirements in English.  
An in-depth analysis of cinematic art, emphasizing feature films. Films and issues studied will include major works of American cinema and world cinema, newer critically-acclaimed films, the history of film, the social significance of film, and contemporary issues related to film.
- ENGL 375 *Special Topic in Literature or Language* Three Credit Hours  
Prerequisite: Completion of core requirements in English.  
A study of an individual author, topic, or problem in literature or language.
- ENGL 401 *Independent Study* Three Credit Hours  
Prerequisite: Approval of the department head.  
Open to senior English majors with a GPA of 3.0 or better.  
A tutorial course individually designed to meet the needs or special interests of one or a few students. Assignments, tutorial sessions, tests, and papers will be assigned by the professor in consultation with individual students.
- ENGL 402 & ENGL 403 *Senior Seminar I & II* Three Credit Hours  
Each Semester  
Open to senior English majors.  
A seminar on an individual author, topic, or problem, as suggested by members of the faculty or by groups of English majors and subject to the approval of the department head in consultation with the instructor. The principal requirement of the course will be a long research paper that will test the student's ability to effectively research a topic and construct a complex argument based on that research.
- ENGL 411 *Legal Writing* Three Credit Hours  
Prerequisite: ENGL 102  
Study and practice of effective writing techniques and terminology pertinent to the legal profession.
- ENGL 412 *Rhetoric of Law* Three Credit Hours  
Prerequisite: ENGL 102  
Study and practice of principles of oral argument applicable to the legal profession.
- ENGL 414 *Modern English Grammar* Three Credit Hours  
Prerequisite: Completion of core requirements in English.  
An intensive study of the syntax of Present Day English. The course also

- includes a review of traditional grammar, focusing primarily on the parts of speech. Special attention is given to linguistic theory, particularly regarding the acquisition of language.
- ENGL 415 *History of the English Language* Three Credit Hours  
Prerequisite: Completion of core requirements in English.  
A historical survey of the syntactic and phonological features of Old, Middle, Early Modern, and Present Day English. Special attention is given to the varieties of American English, particularly African American Vernacular English.
- ENGL 426 *Creative Writing: Fiction* Three Credit Hours  
Prerequisite: Completion of core requirements in English.  
A study of the craft of fiction and its most important elements. Students will consider appropriate models and, in a workshop setting, develop their own skills. Requirements include completion of a substantial piece of fiction.
- ENGL 427 *Creative Writing: Poetry* Three Credit Hours  
Prerequisite: Completion of core requirements in English.  
A study of the craft of poetry, including the examination of appropriate models and theories, and, in a workshop setting, directed practice in writing. Requirements include completion of six to eight well-crafted poems.

### Fine Arts Course Descriptions

- FNAR 205 *Music Appreciation* Three Credit Hours  
A non-technical course to enhance the student's understanding and enjoyment of music by a twofold approach: first, to gain fundamental knowledge of style, content, and form of the most outstanding works of the great composers; and second, to study the evolution of musical art up to the present time; particular emphasis is placed upon the latter.
- FNAR 206 *Art Appreciation* Three Credit Hours  
An introduction to the fundamental elements of art with the intent to gain an understanding of the relevance and influence of visual art in culture. Course includes a wide range of art-making experiences and field trips to local art institutions.
- FNAR 207 *Survey of Art History* Three Credit Hours  
A survey of the history of Western art from pre-history to the modern day. The techniques and content of a broad range of painting, sculpture, architecture, and other artistic mediums will be examined within the context of the cultural environment in which they were created.

- FNAR 209 *Music Theory I* Three Credit Hours  
Study of the components of musical composition; construction of major and minor scales, identification of harmonic and melodic intervals, construction of primary triads and their inversions, transposition of band instruments, sight singing and ear training.
- FNAR 210 *Music Theory II* Three Credit Hours  
Prerequisite: FNAR 209  
Continuation of Music Theory I. The structure and use of all diatonic chords and their inversions, identification of nonharmonic tones, introduction to modulations, sight singing and ear training.
- FNAR 250 *Special Topics in Fine Arts* Three Credit Hours  
Offerings may include art-related topics such as Modern Art, Art of the South, European Art, and Architecture; as well as music-related topics including studies of individual composers and the Baroque, Rococo, Classical, and Romantic Period.
- FNAR 304 *Drawing* Three Credit Hours  
An introduction to the traditional principles and techniques of drawing through exploration of line, shape, perspective, proportion, volume, and composition.
- FNAR 305 *Painting* Three Credit Hours  
An introduction to the painting process through the fundamentals of color, value, shape, contrast, blending, and glazing using acrylic paint and a variety of brushes and surfaces.
- FNAR 306 *Photography* Three Credit Hours  
Prerequisite: Permission of the instructor.  
An exploration of the fundamental techniques of digital photography through critical examination of historical examples and hands-on experience in a variety of photographic genres.
- FNAR 307 *Digital Forensic Photography* Three Credit Hours  
The study and application of photographic methods to record material evidence of a crime/accident scene during investigative actions for the purpose of evidence in court in both military and civilian settings. Includes instruction in digital camera operation, crime scene sketching, photographic record keeping, and legal testimonial preparation.
- FNAR 350 *Advanced Special Topics in Fine Arts* Three Credit Hours  
Advanced study of special topics in the fine arts.

**Communication Course Descriptions**

- COMM 205 *Informative Speaking* Three Credit Hours  
Prerequisite: ENGL 101  
The general principles of speech composition and speech presentation; practice in expository speaking. Includes the use of computer technology to create effective visual aids.
- COMM 206 *Persuasive Speaking* Three Credit Hours  
Prerequisite: ENGL 101  
The general principles of rhetoric; practice in speaking to secure a desired reaction from an audience. Includes the use of computer technology to create effective visual aids.
- COMM 207 *Introduction to Journalism* Three Credit Hours  
Prerequisite: ENGL 102  
An introduction to print journalism with emphasis on writing news and feature articles.
- COMM 216 *Communications in Business* Three Credit Hours  
Prerequisite: ENGL 102  
Required of sophomores seeking a degree in the School of Business.  
A study of written and oral communication in organizations. Emphasis is given to communication theory including communication flows and barriers, as well as the psychology of communicating good, neutral, negative, and persuasive messages. The course also covers career planning, delivering professional presentations, electronic communications, and writing formal reports.
- COMM 260 *Technical Writing and Communication* Three Credit Hours  
Prerequisite: ENGL 102  
Required of sophomores seeking a degree in the School of Engineering.  
This course develops students' abilities to research, evaluate, and produce formal, documented projects that demonstrate awareness and mastery of technical and professional writing conventions.
- COMM 413 *Advanced Composition* Three Credit Hours  
Prerequisite: ENGL 102  
The study and practice of advanced writing techniques, including use of computer technology for web publishing.
- COMM 499 *Internship in Professional Communication* Three Credit Hours  
Prerequisite: Completion of either ENGL 411 or COMM 413 with a grade of "C" or better; for students not majoring in English, permission of the department head.  
A practicum to apply previously acquired skills to professional experience. Students work with a department faculty member and under the supervision of professionals in business, communications, law, religion, health, or other field. Student interns must provide their own transportation and must adhere to all college policies regarding internships.

### Philosophy Course Descriptions

PHIL 201 *Introduction to Philosophy* Three Credit Hours

An inquiry into the nature of philosophic thinking, especially with regard to the problem of knowledge and the nature of reality. Study of the classical origins of Western philosophy, as well as more recent developments.

PHIL 202 *Reasoning and Critical Thinking (Logic)* Three Credit Hours

A study of the principles and methods which distinguish valid from invalid arguments. After a brief examination of what an argument is, the concepts of validity and invalidity are introduced, and a systematic study of the principles governing the application of these concepts to arguments is undertaken. An extensive treatment of traditional Aristotelian logic (the syllogism, rules of validity, immediate inference, etc.) is supplemented by an introduction to principles of modern symbolic logic.

PHIL 290 *Ethics* Three Credit Hours

A study of the nature of morality and moral reasoning through critical analyses of the writings of classical and contemporary thinkers on this subject. Problems regarding the role of reason in human conduct will be examined in detail, with emphasis upon the nature of the good life, happiness, moral obligation and duty, right and wrong, and the nature of moral language.

PHIL 302 *Philosophy of Religion* Three Credit Hours

An analysis of what religion is, the role it plays in human life, and how it differs from such other areas of life as ethics and science. The arguments for and against the existence of God are examined, as is the appeal to religious experience (e.g., mysticism). Criticism of religion (e.g., that of Freud and Marx) is considered, as are the roles of faith and revelation and the questions of evil and immortality.

PHIL 401 *Independent Study in Philosophy* Three Credit Hours

Prerequisite: Approval of the department head.

A tutorial course individually designed to meet the needs or special interests of one or a few students. Assignments, tutorial sessions, tests, and papers will be assigned by the professor in consultation with individual students.

PHIL 409 *Seminar in Philosophical Topics* Three Credit Hours

Prerequisites: at least junior standing and consent of the instructor.

A study of selected topics from various fields of philosophy (e.g., philosophy of history, philosophy of science, aesthetics, philosophy of law) with special emphasis upon their contemporary relevance and interdisciplinary character. Content in any given semester to be determined by student needs.

PHIL 410 *Man in Crisis: The Problems of Good and Evil* Three Credit Hours

Prerequisites: at least junior standing and (due to limited enrollment) consent of the instructor.

A critical look at a variety of crises facing modern humanity and how they impact upon society; their trends, right/wrong, good/evil. Consideration of crises in relationship to theology, duty, freedom, honor, justice, law, and happiness. Some lecture, considerable discussion, and classroom presentations.



## Department of History

Department Head: Neulander

Professors: Grenier, Knapp, Moore, Neulander, Preston, Sinisi

Associate Professors: Boughan, Johstono, Mushal, Renouard, Taylor, Wright

Assistant Professors: Aguirre, Giblin, Maddox

Visiting Professor: Knight

The Department of History endeavors to give students an acquaintance with, and an appreciation for, our historical heritage and seeks to enable them to see the relationship between causes and effects in the historical development of their own and other countries and of civilization at large. Furthermore, the study of history is intended to assist the student's development of critical thinking, including the analysis and evaluation of historical evidence and the ability to integrate and interpret such data. History has proven to be a useful preparation for careers in the business, legal, ministerial, military, and other public service professions, as well as a preparation for continuing study in graduate history programs. The Department offers the student majoring in history ample freedom in the selection of upper level courses within the department and, with 24 hours of general electives, among courses offered by other departments.

*From within the department*, students majoring in history are required to take the following courses: HIST 103-104 (History of Western Civilization) or HIST 105-106 (History of World Civilization); HIST 201-202 (Survey of American History); HIST 203 (Introduction to the Discipline History); two courses from Group I (European), two courses from Group II (American), one course from Group III (Non-Western World), and one course from Group IV (Military). Students will also have to take one of the following capstone seminars: HIST 443, 444, 445, or 446. In addition, students are required to take two additional courses as history electives. Courses that meet group or history elective requirements must be 300 level or above.

*Group I. European.* HIST 321 (The Middle Ages), HIST 322 (The Viking Age), HIST 323 (Ireland in the Medieval World), HIST 324 (The French Revolution and Napoleon), HIST 325 (Europe, 1815-1914), HIST 326 (Europe since 1914), HIST 327 (England to 1660), HIST 328 (Great Britain 1660-Present), HIST 329 (The Ancient Greeks), HIST 330 (The Romans), HIST 333 (Scotland Since 1707), HIST 334 (Crime and Punishment Through the Ages), HIST 335 (Hitler and National Socialism), HIST 336 (Modern France, 1848-2000), HIST 338 (Britain and World War I), HIST 339 (Special Topics in European History), HIST 340 (The Renaissance), and HIST 341 (The Reformation and Wars of Religion).

*Group II. United States.* HIST 300 (Colonial America), HIST 301 (Revolutionary America), HIST 303 (The Early Republic), HIST 304 (The Civil War), HIST 305 (The Gilded Age, 1865-1900), HIST 307 (U.S. History, 1900-1945), HIST 308 (U.S. History, 1945-present), HIST 309 (South Carolina History), HIST 310 (African-American

History to 1865), HIST 311 (African-American History since 1865), HIST 312 (The Modern Civil Rights Movement), HIST 313 (A Cultural History of Modern America), HIST 314 (History of the U.S./Mexico Borderlands), HIST 315 (American Indian History - Pre-contact to the Present), HIST 316 (The Old South), HIST 317 (The New South), HIST 318 (The American West), HIST 319 (American Labor History), and HIST 320 (Special Topics in American History).

*Group III. Non-Western World.* HIST 357 (The History of Pre-Modern China), HIST 358 (The History of Modern China), HIST 359 (Silk Roads and Nomadic Empires), HIST 360 (The History of Japan), HIST 361 (Early Islamic History), HIST 362 (Modern Middle East), HIST 364 (Arab-Israeli Conflict), HIST 365 (Special Topics in Non-Western History), HIST 366 (Colonial Latin America), HIST 367 (Military Coups & Dictatorships in Latin America), and HIST 368 (History of Mexico).

*Group IV. Military and Diplomatic.* HIST 380 (World War I), HIST 382 (History of Military Leadership), HIST 383 (Patterns of War to 1763), HIST 384 (U.S. Military History), HIST 385 (Greek and Roman Warfare), HIST 386 (World War II in the Pacific), HIST 387 (History of the Vietnam War), HIST 388 (U.S. Foreign Relations since 1898), HIST 389 (The Global Cold War, 1917-1991), HIST 391 (Special Topics in Military History), and HIST 393 (World War II in Europe and Africa).

*From outside the department*, students majoring in history are required to take 12 semester hours of a modern language; PSCI 102 (American National Government), which meets the social science core requirement as designated by the College; six hours of political science (PSCI prefix) in courses numbered at the 300-400 level; and three hours of SHSS courses numbered at the 300-400 level. All history majors are required to take at least 12 semester hours of English, 16 semester hours of science (8 hours each from the same science), and 6 semester hours of mathematics. For further guidance, see the curriculum for history majors in the Courses of Study section of this catalog.

**Minor in African American Studies  
(Please refer to p. 119)**

**Minor in History  
(Please refer to p. 139)**

**Minor in International Relations  
(Please refer to p. 144)**

**Minor in Southern Studies  
(Please refer to p. 155)**

**History Course Descriptions**  
(Course numbers in parentheses are those used prior to 2007.)

**History Courses**

AFAM 205 *Introduction to African American Studies* Three Credit Hours  
Required for a minor in African American studies.

This course introduces the major disciplines and topics that comprise African American Studies. It also provides orientation to faculty, institutional, and community resources, and a foundation for subsequent coursework and research in the field. The interpretive frameworks include the slave community, black religion, the Harlem Renaissance, black cultural pride, and contemporary issues of race and gender.

HIST 103 and HIST 104 *History of Western Civilization* Three Credit Hours  
Each Semester

A two-semester survey of the development of European civilization from ancient times to the present. Among the major topics examined during the first semester (to 1648) are Classical Greece, Republican Rome, Imperial Rome, the Christian Church, Feudalism, the Renaissance, the Protestant Reformation, and the Age of European Exploration. Major topics examined during the second semester (since 1648) include Absolutism, the Enlightenment, the French Revolution, the Industrial Revolution, Liberalism, Nationalism, Imperialism, Modernism, and Totalitarianism.

HIST 105 and HIST 106 *History of World Civilization* Three Credit Hours  
Each Semester

A survey of the development of human civilizations, with special attention to cultural borrowing, demographic change, technological development, religion and philosophy. Topics examined in the first semester include the first civilizations of the Near East, the Mediterranean, Africa, Asia, and the Americas, the rise of bureaucratic empires, the spread of world religions, feudalism, and the Silk Road. Topics examined in the second semester include the Columbian Exchange, the African slave trade, the scientific revolution, industrialization, imperialism, and nationalism.

HIST 201 and HIST 202 *A Survey of American History* Three Credit Hours  
Each Semester

Required of all history majors.

Survey of American history from the period of discovery to the present; a brief treatment of the colonial period, followed by a more detailed study of such subjects as the causes of the Revolution, the framing of the Constitution, the development of political parties, the sectional conflict, economic progress and problems, and foreign relations; special emphasis placed on understanding the nature of American democracy and the role of the United States in world affairs from 1789 to the present.

HIST 203 *Introduction to the Discipline of History* Three Credit Hours  
Required of all history majors and history minors.

This course is an introduction to historical research and writing. Students will study historiography and the mechanics of constructing historical arguments and papers by working with both primary and secondary sources. The historical period and focus of the course will depend upon the instructor.

HIST 205 *Special Topics in History and Film* Three Credit Hours

This course will look at film in historical context. Students will watch films and analyze their uses as primary and/or secondary sources for historical study. They will learn about history of various periods through the use of film.

HIST 206 (417) *History of the Non-Western World* Three Credit Hours

Origins and development of selected non-Western cultures, examining their historical and cultural values and customs as well as their social and political institutions. Emphasis is placed on the cultures of China, Japan, Southeast Asia, the Indian Subcontinent, the Arab and Islamic world, sub-Saharan Africa, and the Americas.

HIST 207 *Perspectives on Contemporary Conflicts* Two Credit Hours

A brief survey geared to graduating contract cadets who are preparing for foreign deployment in times of conflict. Its purpose is to supply a concise review of topics related to the specific region that will help prepare them for their tour of duty. Topics to be covered include issues of perception, foreign policy, religion, the region's history, cultural issues, and counsel from returning military personnel. Each topic will be taught and directed by faculty and military personnel who are experts in the specific subject.

**United States History**

HIST 300 *Colonial America* Three Credit Hours

A study of the founding and development of the British mainland colonies in North America through the 1760s. Topics include European motivations for exploration and colonization; the making of the Atlantic World and comparative colonization; the development of social, economic, political, labor, and religious institutions in British America; and international rivalries and conflicts.

HIST 301 *Revolutionary America* Three Credit Hours

A study of the origins, events, and results of the American Revolution, 1760s to 1800. Topics will include the political, economic, religious, and ideological origins of the Revolution; the military history of the Revolution; the participation of "outsiders"—women, Indians, African Americans—in the Revolution; the debate over the Constitution; the American Revolution as part of the "Age of Revolution"; and the challenges and crises of the new United States government during the 1780s and 1790s.

HIST 303 *The Early Republic* Three Credit Hours

A study of American history, 1800-1850, with an emphasis on politics, economics, military affairs, and religion. There will be detailed studies of men such as Jefferson, Hamilton, Jackson, Clay, Webster, and Calhoun. Significant attention will also be paid to the rise of sectionalism, the growth of American political party systems, the War of 1812, and the Mexican-American War.

HIST 304 *The Civil War* Three Credit Hours

The political, economic, diplomatic, and military history of the United States, 1850-1865, emphasizing the forces that tended to bind or disrupt the Union and including a detailed account of the war.

HIST 305 *The Gilded Age, 1865-1900* Three Credit Hours

A study of U.S. History, 1865 to 1900. This course examines several large movements and developments, including entrepreneurial capitalism, immigration, constitutional affairs, politics, and agrarian reform. Special attention will be paid to Reconstruction, Western Expansion, and the Spanish-American War.

HIST 307 *U.S. History, 1900 to 1945* Three Credit Hours

A study of U.S. History, 1900 to 1945. This course examines the social, cultural, political, military, economic, and foreign policy development of the United States. Special attention will be paid to Progressivism, World War I, the Great Depression, and World War II.

HIST 308 *U.S. History, Since 1945* Three Credit Hours

A study of U.S. History since 1945. This course examines the social, cultural, political, military, economic, and foreign policy development of the United States. Special attention will be paid to the Korean War, the Cold War, Vietnam, the Civil Rights movement, the Great Society, the Reagan Revolution, and post-Cold War America.

HIST 309 (402) *South Carolina History* Three Credit Hours

A survey of the political, economic, social and intellectual development of South Carolina from its discovery to the present, with emphasis on the relation of the state to the South and to the nation.

HIST 310 *African American History to 1865* Three Credit Hours

This course is an historical examination of the African American experience from 1619 to 1865. The curriculum will move through the experiences of African Americans in the British American colonies and the newly formed United States, discuss the institution of slavery and definitions of race, the antebellum South, Abolitionism, and trace the meaning of Emancipation and how the Civil War affected the future of the black community.

HIST 311 *African American History since 1865* Three Credit Hours

This course will study the history of African Americans from 1865 to the present. It will begin with emancipation and reconstruction and highlight the social, political, and economic transformation of the black community in the late nineteenth century. Major themes of the course will include the Great Migration, World War I, the Depression, World War II, the Cold War, black leadership, and contemporary issues such as, Afrocentricity and the emergence and influence of Hip Hop culture in American society.

HIST 312 (409) *The Modern Civil Rights Movement* Three Credit Hours

This seminar introduces students to current research on the history of the modern civil rights movement, 1941-1975. The aim of this course is to explore the evolution of the modern civil rights era from its beginning during World War II and the integrationist perspective of the 1950s to the militant black power and separatist viewpoint of the early 1970s. It will also discuss how the black power movement grew out of the civil rights movement and how independent black politics, black cultural pride, and armed resistance to terrorism operated in tandem with legal efforts and nonviolent protest in the struggle for African American social equality.

HIST 313 *A Cultural History of Modern America* Three Credit Hours

This course uses examples of American culture to deepen student's understanding of the past century's major developments. These examples, including television programs, songs, films, and material culture, are placed in historical, cultural, and critical contexts. We will focus on three questions regarding culture in American history: does it serve as a transformative agent or merely reflect larger societal changes; how have various cultural expressions helped shape a national democratic culture and identity; and what have been the terms of inclusion and exclusion?

HIST 314 *History of the U.S./Mexico Borderlands* Three Credit Hours

This course surveys the history of the U.S./Mexico borderlands, from the Pre-Columbian period to the present day. As a borderlands course, students will be prompted to think beyond the framework of the nation-state, and analyze how political, economic, and cultural boundaries are constructed and contested. Topics include the Spanish colonial heritage, Manifest Destiny, the treatment of marginalized groups (indigenous peoples, women, peasants, etc.), immigration, globalization, and the drug trade.

HIST 315 *American Indian History: Pre-Contact to the Present* Three Credit Hours

This course is an introduction to American Indians' histories, societies, religions, and cultures from ancient America to twenty-first century America. It highlights Native peoples' perspectives and demonstrates their central roles in shaping American history and culture. The course teaches an understanding of and appreciation for American Indians' dynamic and diverse cultures; surveys the major themes, topics, problems, events, and persons in Indian-white relations; and examines the unique methodologies associated with Indian history.

HIST 316 (406) *The Old South* Three Credit Hours

A survey of major issues and institutions in the history of the American South from the colonial period through the Civil War. Particular attention is given to the plantation, slavery, states rights, fundamentalist religion, the ethic of honor, and the origins and consequences of the Civil War. Among the questions addressed are what caused a Southern regional mentality to develop and how different was the South from the rest of the nation.

HIST 317 (407) *The New South* Three Credit Hours

A survey of major issues and institutions in the history of the American South since the end of the Civil War. Particular attention is given to the Cult of the Lost Cause, the New South Movement, racial segregation, progressivism, religion, music, literature, the second reconstruction, and the emergence of the sunbelt South. Among the major questions addressed are why, and how much, did the South change after the Civil War and does a distinctive South still exist.

HIST 319 *American Labor History* Three Credit Hours

This course explores the history of working people in the United States from the Colonial era to our “post industrial” or “globalized” present. The course continually returns to three broad areas of historical change: 1) modes of production and work experiences; 2) the continual making and re-making of the American working class; and 3) workers’ movements for social justice and the ideas that animated those movements. Students will deepen their understanding of the interplay of class, ethnicity, race, gender, and region in U.S. history and will be encouraged to think critically about their own work experiences.

HIST 320 (formerly 492) *Special Topics in American History* Three Credit Hours

Examples include African Americans in U.S. Military History, American Legal History, American Business History, American History as portrayed in photography and film, 20th Century American History as seen through Literature, the Roaring Twenties, the Depression and New Deal, and the U.S. from Korea to Vietnam.

### European History

HIST 321 *The Middle Ages* Three Credit Hours

The nature of society and events in Western Europe from the 7th and 8th centuries A.D. until the decay of the medieval world in the fourteenth century. Topics include the rise of the Franks and the Papacy, the establishment of feudalism, the wars between the popes and the holy roman emperors, the Crusades, intellectual revival, establishment of town democracy, and rise of nation-states at the end of the period.

HIST 322 *The Viking Age: c. AD 800-1200* Three Credit Hours

The image of the fierce Vikings, spreading fear and dread across Europe, has been transmitted into the popular culture of today through literature, music and movies, but is this the only legacy of the Vikings? This course will use both primary texts and

material culture to not only consider what gave the Vikings their military prowess, but to examine also the economic, political and cultural impact they made in their original homelands, and across Europe, Russia, and Byzantium. Some of the topics considered will be their ship building, religious beliefs, literature, daily life, their role in the growing urbanization of Europe, the creation of economic markets, legal tradition, place-name elements, their military ability, and their roles as mercenaries for Byzantium.

HIST 323 *Ireland in the Medieval World: c. AD 400-1369* Three Credit Hours

This course will examine the history of Ireland from c. AD 400-1369. Special focus will be on the cultural, economic, political and religious developments of the Irish people and an introduction to Ireland’s role in the development of the Christian West. Students will also have the opportunity to learn about the rich material culture left to Ireland from the time period and compare primary sources to reports on archaeological remains. Some of the topics to be considered will be Irish kingship, early Irish law, kindred groups, monastic settlements, literary traditions, their military ability, relationships between the Irish and Vikings, Brian Boru and the arrival of the Anglo-Normans.

HIST 324 *The Era of the French Revolution and Napoleon* Three Credit Hours

A survey of the causes of the Revolution followed by an examination of the principal events of the period with stress on the major personalities, the ideologies and revolutionary mentality, the political and social aspirations of the lower social orders, the unstable nature of the various revolutionary governments, and the rise of Napoleon and his achievements.

HIST 325 *Europe, 1815-1914* Three Credit Hours

The course of European history from Napoleon’s defeat at Waterloo to the outbreak of World War I. Emphasis is placed on political reaction and reform; the Industrial Revolution and its economic, social and political effects; the Darwinian revolution and its impact on Western thought about man and his origins; the rise of nation-states in Italy and Germany; overseas imperialism; and the factors that contributed to the outbreak of the First World War.

HIST 326 *Europe Since 1914* Three Credit Hours

A survey of the origins and impacts of two World Wars on the major European states, their political, social, and economic development, and their relative positions today.

HIST 327 *England to 1660* Three Credit Hours

A survey of English history from prehistoric times through the English civil war of the 17th century and its aftermath. Emphasis is placed on the development of

Parliament, the monarchy, the legal system, and local government. The evolution of British society is traced from Celtic and Roman times through King Alfred, the Anglo-Saxons, the Normans, the Wars of the Roses, the Tudors, and the first Stuart monarchs. Special attention is paid to Celtic warfare, the Roman conquest, Anglo-Saxon warfare, the armored knights of Norman times, and the English legacy to Americans.

HIST 328 *Great Britain, 1660-Present* Three Credit Hours

A survey of British history from the Stuart Restoration to the present. The course will examine the creation of Britain out of the nations of England, Scotland, Wales and Ireland and will explore Britain's experiences with industrialization, imperialism, the world wars of the twentieth century, and the changes to the nation's status as a global power since 1945.

HIST 329 (421) *The Ancient Greeks* Three Credit Hours

A detailed examination of ancient Greek political history and the ancient Greek contribution to politics, war, philosophy, literature, and art; the Archaic and the Classical ages; and the Hellenistic period to the Roman conquest.

HIST 330 (422) *The Romans* Three Credit Hours

A survey of Roman history from Rome's origins as a Latin village through its conquest of Italy, defeat of Carthage and Greece, and the Roman empire to dominance over the Mediterranean world; the empire's gradual corruption, loss of political freedoms, the transition to an absolutist, Christian monarchy. Emphasis is placed on the personalities and values of the Romans and how these led to Rome's glories and failures.

HIST 333 (435) *Scotland Since 1707* Three Credit Hours

A survey of the political, social, cultural, and economic history of Scotland since union with England. Topics include Jacobitism, the clan system, the Highland clearances, the industrialization of the Lowlands, and Scottish nationalism. Special emphasis is placed on attempts to retain Scottish distinctiveness while integrating into the wider community of Great Britain.

HIST 334 *Crime and Punishment Through the Ages* Three Credit Hours

A survey of the way past societies in the Western tradition have defined and dealt with crime, starting with the Code of Hammurabi and the Mosaic Law in the Ancient Near East and ending with the invention of the modern prison system and police forces in Europe and America in the early 19th century. The focus will be on how each society's values shaped its definition of what a crime was, the way investigations and trials were conducted and the way convicted criminals were punished in each time and place.

HIST 335 (481) *Hitler and National Socialism* Three Credit Hours

A survey of the Nazi movement from its late nineteenth century antecedents to its culmination in 1945. Special emphasis will be given to the life of Hitler and to

areas of controversial interpretation. Among these are the alleged reactionary nature of National Socialism, the "legal" rise of the party to power, the statesmanship of Hitler, his sanity, and the Holocaust.

HIST 336 *Modern France, 1848-2000* Three Credit Hours

This course will look at the history of France from the Revolution of 1848 and the rise of the Second Empire, through the two world wars, to 2000. It will focus on this era's political, social, and cultural changes. Special attention will be paid to the rise of Paris as a world capital, the affects of World War I on interwar politics, gender and culture, the generation gap caused by the postwar baby boom, and the integration and resistance of French citizens to the merging European Union at the end of the twentieth century.

HIST 338 *Britain and World War I* Three Credit Hours

This course will consider the British experience of World War I. In addition to an overview of the military experience of the war, the course will examine the variety of ways in which this war was a transformative experience. Topics will include: the experience of the home front, changing roles of the government, new definitions of citizenship, as well as effects on the empire and on Britain's relationship with Ireland.

HIST 339 (491) *Special Topics in European History* Three Credit Hours

Examples include the Crusades; the Scientific Revolution; the Age of Louis XIV; the Golden Age of the Hapsburgs, 1740-1914; the French Foreign Legion; the Russian Revolution as Portrayed in Literature and Film; the Development of the English Constitution; and Germany since 1945.

HIST 340 *The Renaissance* Three Credit Hours

This course examines movements of artistic, intellectual, renewal that first developed in Italy in the fourteenth and fifteenth centuries, spread throughout western Europe after 1500, and were together named "The Renaissance." The course will examine the Renaissance in its birthplace, the hustling, aggressive communes (city-states) of Trecento and Quattrocento Italy, giving special attention to the republic of Florence. It will consider the Renaissance in its social, economic, and political contexts, and expose its roots in medieval high culture and in the Commercial Revolution of 1000-1350.

HIST 341 *The Reformation and Wars of Religion* Three Credit Hours

This course examines the sixteenth-century European Christian reform movements that established the Protestant churches and reinvented the Roman Church. It considers the Reformation not just as a religious transformation, but as a process of profound and violent social, political, and cultural upheaval in Early Modern Europe. Topics addressed will include the Reformation's roots in medieval Christian theology and Renaissance humanism, the role of religious reform in the construction of modern states and notions of family and gender, reformed theology as a spur to

violent class conflict, the formation of radical Christian theocratic communities, and the civil and international religious wars of the sixteenth and seventeenth centuries.

HIST 342 *Spain, 1000-1700* Three Credit Hours

A survey of seven centuries of the history of the Iberian peninsula, from the age of the *Reconquista* to the building of the great transoceanic empires of early modern Spain and Portugal. The course focuses on politics, culture, society, and religion in the Christian kingdoms, especially Castile; the contributions of *al-Andalus* (medieval Islamic Spain) to the cultures of the Christian kingdoms in particular, and to the Latin West in general, are also specially considered.

HIST 343 *War and Society in Early Modern Europe* Three Credit Hours

War was a chronic condition of western Europe from the fourteenth century through the seventeenth. It was also a fundamental cultural institution and big business. This course examines war as a social, cultural, and economic construct in Early Modern Europe. While the course will hardly ignore such topics as weapons, tactics, and combat operations, these are not its primary concerns. Rather, it focuses upon military culture and military institutions, and how they were determined by – and in turn determined – broader religious, political, social, and economic trends. Special attention will be paid to mercenary companies and their captains as both products and drivers of early capitalism, particularly in Italy, and to the experience of chronic war in the Low Countries in the latter half of the sixteenth century, as the formidable Army of Flanders struggled to quell Dutch revolt against Spanish rule.

### Non-Western History

HIST 356 *The History of Africa, 1500-Present* Three Credit Hours

An examination of the history of Africa from the beginning of the Western slave trade to the present day. Topics will include the rise and fall of slavery and the slave trade in Africa, the rise of African economies, European conquest and imperialism, decolonization, and post-imperial politics and society. Special attention will be paid to the diversity of experience on the African continent as well as the region's relationship to other areas of the world.

HIST 357 (462) *The History of Premodern China* Three Credit Hours

The history of China from its beginnings to the eve of its clash with the West in the nineteenth century. The course examines the development of premodern China's political, social, and economic institutions, many of which lasted into the twentieth century. Special emphasis will be given to premodern religion, popular culture, and daily life.

HIST 358 (463) *The History of Modern China* Three Credit Hours

The history of China's tumultuous entry into the modern world. The course examines China's struggle to adjust its traditions to the reality of Western dominance and

the radical changes in Chinese society that this adjustment caused. Emphasis will be given to the failure of the 1911 Revolution, the rise and victory of the Communist Party, the Cultural Revolution, and the regime of Deng Xiaoping.

HIST 359 (464) *Silk Roads and Nomadic Empires* Three Credit Hours

This course looks at the history of the caravan trade routes across Eurasia that have become known as "The Silk Road." The significance of these trade routes lies in the fact that they ensured the distribution and mixing of luxury goods, religions, technologies, literatures, and peoples from one end of Eurasia to another. In fact, many scholars argue that these trade routes created a unified economic world system, which has made the cultures of Eurasia materially much stronger than those of any other continent. Moreover, the wealth generated by the silk roads often inspired the creation of nomadic empires that had an immense effect on the great agrarian civilizations that bordered the steppes. Through their immense military strength and prowess, these nomadic empires often significantly affected the history of the outlying sedentary civilizations. Thus, this course's focus will be the Central Eurasian nomads and oasis-dwellers who played a central role in the functioning of the Silk Road and their impact on their agricultural neighbors.

HIST 360 (466) *The History of Japan* Three Credit Hours

An examination of Japan's history from its prehistoric origins to its postwar economic miracle. Topics such as the "Horserider Theory," Heian court life, samurai rule, Japanese "feudalism," Shintoism, Japanese Buddhism, the Meiji Reform, the prewar militarization, and the postwar transformation into an economic superpower will all receive special attention.

HIST 361 *Early Islamic History* Three Credit Hours

A survey of the early Islamic world roughly from 600 through 1800. There will be geographical emphasis on the Middle East, but the class will also examine North Africa, Spain, Central Asia, and India. The course examines, but is not limited to: Muhammad and the foundations of Islam, Islamic conquests, early dynasties, rise of independent kingdoms, Islamic Spain, Islamic North Africa, Crusades, Mongol invasions, Moghuls, Safavids, and Ottomans.

HIST 362 *Modern Middle East* Three Credit Hours

A survey of Middle East history with an emphasis upon those events that provide historical background and context for current affairs in the region. It covers from around 1800 to the present, with an emphasis on the twentieth- and twenty-first centuries, beginning with the decline of the Ottoman Empire, and goes on to cover the impact of WWI and WWII, Zionism, the rise of modern Middle East states, the Israeli-Palestinian conflict, Arab nationalism, the rise of political Islam and Islamic fundamentalism, a brief history of U.S. interest and activity in the region, the advent and rise of terrorism in the Middle East, and both Gulf Wars.

HIST 364 *The Arab-Israeli Conflict* Three Credit Hours

A study of the turbulent history between the Arab countries of the Middle East and

the state of Israel. The course will cover the rise of the World Zionist Organization, the impact of WWI and WWII diplomacy on the topic, the creation of the state of Israel, the impact of the state of Israel on the Palestinian people, the various wars and conflicts that have emerged between the Arab states and Israel, as well as the first and second Intifada in the occupied territories, the U.S. role in the conflict, and the impact of the Arab-Israeli conflict on terrorism. The course will cover a period roughly from 1900 to the present.

HIST 365 (493) *Special Topics in Non-Western History* Three Credit Hours

Examples include finely focused studies on China, Japan, Columbus and his World, Slavery in the Spanish Main, Portuguese Colonization of Brazil, the History of the Ottoman Empire, the Islamic world, and twentieth-century Africa.

HIST 366 *Colonial Latin America* Three Credit Hours

This course examines Latin American history from Pre-Columbian societies to the nineteenth century independence movements. The primary focus is on colonialism and its influence on the distinct economic, political, and social dynamics that emerged from the often violent contact between Europeans, indigenous peoples, and Africans. Other topics include the Transatlantic slave trade, daily life in the colonies, religion, gender, race and ethnicity, resistance and rebellion, the Enlightenment, nationalism, and independence struggles.

HIST 367 *Military Coups and Dictatorships in Latin America* Three Credit Hours

This course examines Latin America's military coups and dictatorships since 1810. Students will first explore how Iberian militarism and colonialism influenced the rise of military strongmen in the nineteenth century. Students will then analyze primary sources to gain an understanding of the political, economic, and cultural implications of authoritarianism. Other major topics include: left-wing/right-wing political ideologies, popular reactions and/or resistance to dictatorships, and U.S./Latin American relations.

HIST 368 *The History of Mexico* Three Credit Hours

This course surveys Mexican history from the Pre-Columbian period to the present day. Topics include Mexico's diverse indigenous societies, Spanish colonialism, the treatment of marginalized groups (such as indigenous peoples, women, peasants, and ethnic minorities), the struggle for democracy, femicide, U.S./Mexico relations, and the twenty-first century war on drugs.

HIST 371 *Historical Studies in Leadership* Three Credit Hours

Case studies in how different eras and cultures have envisioned good leadership and of how significant people have embodied its qualities. Examples include: Ethics and Leadership in the Classical World, Founders of the American Republic, Great Military Commanders, and Civil Rights Leaders of the Modern World.

## Military and Diplomatic History

HIST 375 *The French and Indian War, 1754-1763* Three Credit Hours

The French and Indian War was one of the most significant and decisive conflicts in American and World history. It was the American theater of operations in the first world war, known as the Seven Years' War (1756-1763). Fighting began in America and spread to Europe, the Caribbean, Mediterranean, West Africa, India, and the Philippines. The war pitted Britain, Prussia, and the Thirteen Colonies against France, Austria, Russia, and Spain in a contest for imperial domination. In America, Indian nations defined much of the character of the war and profoundly influenced the war's origins and outcomes. The course examines the major characters, campaigns, and combatants of the Seven Years' War in the Americas, Europe, Africa, and Asia.

HIST 380 (475) *World War I* Three Credit Hours

This is a course on the Great War, the reality of which does not quite meet the stereotype. While there was the stalemate of the trenches, there was great movement in the East and even in the West in the last year. During the war, armies virtually rearmed with new weapons and retrained, adopting new tactics. Mass assaults gave way to storm squads; cavalry gave way to armor and aircraft. The squandering of lives led to mutinies. Economies saw unprecedented mobilization. It was total war, at a cost of 5,500 lives every day for a 1,500 day war, and one can argue that the outcome was far more cataclysmic than that of the Second World War.

HIST 382 *History of Military Leadership* Three Credit Hours

This course examines the many historical models of military leadership from the ancient world to the present, with emphasis on trends in strategy, tactics, management, and civil-military relations. Successful military leadership has meant many different things at different levels of command and in different places and times, and yet there are some qualities of leadership that have proved enduring.

HIST 383 (487) *Patterns of War to 1763* Three Credit Hours

The patterns of war from ancient times to the eve of the American Revolution with emphasis on change in the technological, organizational, and social-political nature of war.

HIST 384 (488) *U.S. Military History* Three Credit Hours

This course examines the antecedent and development of United States military policy and the conduct of war from the colonial era to the present. This course proceeds from the premise that the military history of the United States is best understood from a combination of "traditional" military history (an emphasis on battles and commanders) and "new" military history (an emphasis on politics, diplomacy, economics, technology, gender, society, and culture).

HIST 385 *Greek and Roman Warfare* Three Credit Hours

This course examines the waging of war in the ancient Mediterranean, particularly among the Greeks and Romans. It explores cultural attitudes toward war, the institutions that supported the waging of war, the actual progress of campaigns and battles, technological and tactical innovation, and consider in what ways or to what extent the warfare of the Greeks and Romans represents the heritage of modern war. The course also carries with it several kinetic modes: making and painting shields, experimenting with Greek and Roman formations.

HIST 386 *World War II in the Pacific* Three Credit Hours

This course will examine the Pacific theater of World War II. The class will examine the causes of the conflict and the course of its military campaigns. The course will devote attention to air, land, and naval combat. The class will ultimately place the events and consequences of the war in the context of the military, diplomatic, and political history of the twentieth century.

HIST 387 (489) *History of the Vietnam War* Three Credit Hours

The history of the American war in Vietnam, including the foundations of French imperialism in Indochina; native resistance; the first Indochina War; American policy, intervention, and withdrawal; the impact on American domestic society; and the fall of the Western-oriented government of South Vietnam.

HIST 388 *U.S. Foreign Relations since 1898* Three Credit Hours

This course explores America's major international relationships - diplomatic, economic, military, and cultural - since 1898. While keeping in mind the interplay between diplomacy and domestic developments, the course will focus on fundamental questions such as: Are America's international relationships primarily motivated by a drive for security and prosperity? To what degree have Americans embraced a national mission to spread liberal, democratic values abroad? To what extent have cultural undercurrents influenced American diplomacy? Major topics will include America's rise to global power, the World Wars, the Cold War, ideology, the military-industrial "complex," U.S.-Latin America relations, the international arms trade, and relations in the Middle East.

HIST 389 *The Global Cold War, 1917-1991* Three Credit Hours

The Cold War was arguably the twentieth century's most significant long-term conflict. This course takes an international perspective on its varied causes and consequences in Europe, the Americas, Asia, and the Middle East. We will explore diplomatic relations between several nations during this era and the many effects the Cold War had on these nations' citizens, including the American military-industrial "complex," the Soviet gulag, and "client" regimes in the developing world. Major topics will include U.S.-Soviet relations and nuclear diplomacy; wars in Korea, Vietnam, and Latin America; crises in Berlin, Budapest, Prague, and Cuba; decolonization and the rise of the "Third World"; "the containment doctrine"; espionage and McCarthyism; and the (surprising) end of the Cold War.

HIST 391 (494) *Special Topics in Military History* Three Credit Hours

Examples include the Napoleonic Legacy in Warfare, the United States in World War I, the Cold War, Nuclear Weapons and Arms Control, Theories of Strategy and Policy, the French Foreign Legion and French Imperial Policy, the Panama Canal and the Balance of Power, the German Army since 1740, and the History of Intelligence and National Security.

HIST 392 (495) *Special Topics in History* Three Credit Hours

Examples include Imperialism, Revolutions in the Western World, Science and Technology in the Western World, the History of Medicine, and Psycho-Sociological History.

HIST 393 *World War II in Europe and Africa* Three Credit Hours

This course will examine the European and African theaters of World War II. The class will examine the causes of the conflict and the course of its military campaigns. The course will devote attention to air, land, and naval combat. The class will ultimately place the events and consequences of the war in the context of the military, diplomatic, and political history of the twentieth century.

HIST 395 *History of Weapons and Firepower* Three Credit Hours

This course will examine the development of weapons since the beginning of western civilization. Attention will be devoted especially to the development of military small arms within the broader histories of technology and military affairs. The class will also study the tactical and operational significance of weapons development and employment. Special emphasis will be placed on a hands on approach to learning, which will include the use of live-fire weapons ranges.

### Capstone Seminars

HIST 443 *Capstone Seminar in American History* Three Credit Hours

A Capstone seminar restricted to history majors with an academic classification of 2B or higher. Requires the writing of a major research paper on a topic in American History. The papers will be presented and discussed in class with the other members of the seminar.

HIST 444 *Capstone Seminar in European History* Three Credit Hours

A Capstone seminar restricted to history majors with an academic classification of 2B or higher. Requires the writing of a major research paper on a topic in European History. The papers will be presented and discussed in class with the other members of the seminar.

HIST 445 *Capstone Seminar in Non-Western History* Three Credit Hours

A Capstone seminar restricted to history majors with an academic classification of 2B or higher. Requires the writing of a major research paper on a topic in Non-Western History. The papers will be presented and discussed in class with the other members of the seminar.



HIST 446 *Capstone Seminar in Military History* Three Credit Hours

A Capstone seminar restricted to history majors with an academic classification of 2B or higher. Requires the writing of a major research paper on a topic in Military History. The papers will be presented and discussed in class with the other members of the seminar.

### Special Course Descriptions

These courses are intended to be offered on an occasional basis, according to student demand and staffing availability. In addition, those courses that suit a seminar or tutorial format will permit students to be exposed to modes of instruction and learning other than those emphasized in lecture-oriented classes.

HIST 490 *Research Project* Three Credit Hours

Prerequisite: Approval of department head and supervising professor.

An independent research project culminating in a formal paper. Research topic determined through consultation between student and supervising professor. Especially recommended for those students considering graduate or professional studies.

HIST 496 *Seminar* Three Credit Hours

Subject to the approval of the department head, a seminar on some special topic or historical problem as proposed by faculty or history majors. Topics include Castro's Cuba, the Founding and Development of the State of Israel, Stalin's Russia, and the Presidency of Franklin D. Roosevelt.

HIST 497 *Tutorial* Three Credit Hours

Subject to the approval of the department head, the tutorial is designed to meet the needs or interests of one or a few students. Readings, tutorial sessions, papers, and/or tests will be assigned by the professor in consultation with individual students.

HIST 498 *Internship* Three Credit Hours

Prerequisite: Permission of department head.

Internships with the South Carolina Historical Society and similar organizations are offered to combine academic training with the acquisition of skills in archival work, historic preservation, and other types of applied history.

### Geography Course Descriptions

GEOG 209 *World Geography* Three Credit Hours

A course dealing primarily with the elements and principles of geography. Familiarity with important global features and locations is stressed. Topics include maps, oceans, atmosphere and winds, climate (elements and patterns), landform, soils and agriculture, mineral resources and industry.

GEOG 301 *Introduction to Geographic Information Systems* Four Credit Hours

Principles and applications of geographic information systems (GIS). Examines the nature and accuracy of spatially referenced data, as well as methods of data capture, storage, retrieval, visualization, modeling, and output using one or more GIS products. Course includes a laboratory component.

GEOG 311 *Economic Geography* Three Credit Hours

The geographic foundations and distributions of economic activities in different parts of the world.

## Department of Intelligence and Security Studies

Department Head: Jensen

Professor: Jensen

Assistant Professors: Fraser-Rahim, Graves

Citadel Fellow: Brady

The department offers an academic major in intelligence and security studies. The major affords students the opportunity to obtain a broad liberal arts education that enriches their lives and prepares them to enhance national security through intelligence and homeland security leadership. The course of study for students majoring in intelligence and security studies begins with a set of core courses to introduce them to the discipline. Students within the major are required to complete one of the concentration areas: Business Intelligence, Chinese Area Studies, Counterterrorism, General Intelligence, and Military Intelligence.

Other Programs and Courses: The Department offers one minor: Intelligence and Homeland Security. The Department also participates in the college's interdisciplinary minors in African-American Studies, International and Military Affairs, Law and Legal Studies, and Non-Western Studies. For a full description of these minor programs, please refer to the appropriate entries in this catalog: Department of History – African-American Studies; Department of Political Science – International and Military Affairs, Law and Legal Studies, and Non-Western Studies.

### Major Requirements: B.A. in Intelligence and Security Studies

The Bachelor of Arts (BA) in Intelligence and Security Studies (ISS) is designed to meet the national security and intelligence needs of military, federal, state, and local governmental agencies; private corporations engaged in the intelligence and security fields; and others who are interested in gaining greater knowledge about the field. The BA consists of 15 courses (45 credit hours) offered by various academic units at The Citadel. In order to provide students with a broad-based liberal arts education, the major is highly interdisciplinary.

This ISS major seeks to develop students' capabilities for critical thinking and systematic analysis and increase their knowledge of effective leadership for national security. Each student completes a required core curriculum consisting of the following courses:

INTL 201 Introduction to Intelligence Studies (3 credits)  
 INTL 210 Homeland Security (3 credits)  
 INTL 301 Advanced Analytics 1 (3 credits)  
 INTL 302 Advanced Analytics 2 (3 credits)  
 INTL 310 Intelligence Collection Systems and Programs (3 credits)  
 INTL 401 Intelligence Support to Military Operations (3 credits)  
 CSCI 227 Introduction to Cybersecurity (3 credits)

In addition, students must complete one of the following concentration areas:

Business Intelligence  
 Chinese Area Studies  
 Counterterrorism  
 General Intelligence  
 Military Intelligence

### The Minor in Intelligence and Homeland Security (Please refer to p. 140)

#### Concentration Areas

#### Business Intelligence

Students learn the role that intelligence plays in the modern business world. Emphasis is placed on providing “decision advantage” to business leaders who must deal with an increasingly competitive entrepreneurial environment. To complete the ISS major, students take five (5) courses from the following list along with three (3) General Intelligence Electives:

*Business Intelligence Core Courses (Students take each course):*

BADM 211 Introduction to Financial Accounting and Reporting (3 credits)  
 BADM 212 Introduction to Managerial Accounting (3 credits)  
 BADM 417 Management Information Systems (3 credits)

*Business Intelligence Electives (Students take two (2) of the following courses):*

BADM 327 Principled Entrepreneurship and the Free Enterprise System (3 credits)  
 BADM 217 Computer Applications in Business (3 credits)  
 BADM 320 International Business (3 credits)  
 BADM 329 Project Management (3 credits)

**Chinese Area Studies**

Students gain an understanding of the language, culture, and history of China in the context of U.S. national interests. To complete the ISS major/Chinese Concentration, students complete the following courses:

*Freshman and Sophomore Language Requirements:*

- CHIN 101 Introduction to Chinese I (3 credits)
- CHIN 102 Introduction to Chinese II (3 credits)
- CHIN 201 Intermediate Chinese I (3 credits)
- CHIN 202 Intermediate Chinese II (3 credits)

*Chinese Area Studies Core Courses (Students take each course):*

- PSCI 231 Introduction to International Politics (3 credits)
- PSCI 337 East Asian Affairs (3 credits)

*Chinese Area Studies Electives (Students take six (6) of the following courses):*

- CHIN 301 Advanced Speaking, Reading, and Writing I (3 credits)
- CHIN 302 Advanced Speaking, Reading, and Writing II (3 credits)
- CHIN 303 Chinese Civilization (3 credits)
- CHIN 307 Business Chinese (3 credits)
- CHIN 450 Undergraduate Seminar: Studies in Special Topics (3 credits)
- HIST 206 (417) History of the Non-Western World (3 credits)
- HIST 357 (462) The History of Pre-Modern China (3 credits)
- HIST 358 (463) The History of Modern China (3 credits)
- PSCI 338 Southeast Asian Affairs (3 credits)
- PSCI 345 South Asian Affairs (3 credits)

**Counterterrorism**

Students gain an understanding of the theory, history, threat, prevention, and response to both international and domestic terrorism. To complete the ISS major, students take six (6) courses from the following list along with two (2) General Intelligence Electives:

*Counterterrorism Core Courses (Students take each course):*

- PSCI 310 Domestic Terrorism (3 credits)
- PSCI 342 International Terrorism (3 credits)
- PSCI 231 International Politics (3 credits)

*Counterterrorism Electives (Students take three (3) of the following courses):*

- BIOL 207 Bioterrorism (3 credits)
- CRMJ 331 Cyber Investigations (3 credits)
- CRMJ 332 Comparative Counter-Terrorism (3 credits)
- CSCI 327 Computer Security (3 credits)
- CSCI 427 Advanced Cybersecurity (3 credits)
- HIST 356 The History of Africa, 1500-Present (3 credits)
- HIST 361 Early Islamic History (3 credits)
- HIST 362 Modern Middle East (3 credits)
- HIST 364 The Arab-Israeli Conflict (3 credits)
- PSCI 331 International Law (3 credits)
- PSCI 332 National Security Policy (3 credits)
- PSCI 339 Middle Eastern Affairs (3 credits)
- PSCI 346 Multinational Peacekeeping (3 credits)
- SOCI 301 Cults (3 credits)

**General Intelligence**

The General Intelligence Concentration provides the broadest and most interdisciplinary approach to the ISS major. As students choose from a wide variety of electives, they are encouraged to work with their advisor to create a unique program that best meets their individual needs. To complete the ISS major/General Intelligence Concentration, students take eight (8) courses from the following General Intelligence Electives list:

- ANTH 202 Cultural Anthropology (3 credits)
- BIOL 207 Bioterrorism (3 credits)
- CRMJ 331 Cyber Investigations (3 credits) (3 credits)
- CRMJ 332 Comparative Counter-Terrorism (3 credits)
- CRMJ 333 Immigration and Security (3 credits)
- CRMJ 381 Organized Crime (3 credits)
- CRMJ 384 International Crime (3 credits)
- CRMJ 392 Computer Crime (3 credits)
- CSCI 327 Computer Security (3 credits)
- CSCI 427 Advanced Cybersecurity (3 credits)
- GEOG 301 Introduction to Geographic Information Systems (3 credits)
- GEOG 311 Economic Geography (3 credits)
- HIST 206 (417) History of the Non-Western World (3 credits)
- HIST 326 Europe Since 1914 (3 credits)
- HIST 356 The History of Africa, 1500-Present (3 credits)
- HIST 362 Modern Middle East (3 credits)

HIST 388 U.S. Foreign Relations since 1898  
 HIST 389 The Global Cold War, 1917-1991  
 INTL 311 Intelligence Successes and Failures (3 credits)  
 INTL 312 America's Drone Campaign Since 9/11 (3 credits)  
 INTL 402 The Military Instrument of Power (3 credits)  
 INTL 464 Intelligence Internship (3 credits)  
 INTL 465 Special Topics in Intelligence (3 credits)  
 PSCI 310 Domestic Terrorism (3 credits)  
 PSCI 332 National Security Policy (3 credits)  
 PSCI 336 Russia and the Commonwealth of Independent States (3 credits)  
 PSCI 339 Middle Eastern Affairs (3 credits)  
 PSCI 342 International Terrorism (3 credits)  
 PSCI 346 Multinational Peacekeeping (3 credits)  
 PSCI 401 Political Issues and Public Policy (3 credits)  
 PSCI 431 American Foreign Relations (3 credits)  
 PSCI 433 Topics in International Politics (3 credits)

### **Military Intelligence**

Students gain a strong background in the history and function of intelligence as practiced by the United States military. To complete the ISS major/Military Intelligence Concentration, students take six (6) courses from the following list along with two (2) General Intelligence Electives:

HIST 326 Europe Since 1914 (3 credits)  
 HIST 382 History of Military Leadership (3 credits)  
 HIST 384 US Military History (3 credits)  
 HIST 386 World War II in the Pacific (3 credits)  
 HIST 387 History of the Vietnam War (3 credits)  
 HIST 388 U.S. Foreign Relations since 1898 (3 credits)  
 HIST 389 The Global Cold War, 1917-1991 (3 credits)  
 HIST 393 WW II in Europe and Africa (3 credits)  
 HIST 391 ST: Greek and Roman Warfare (3 credits)  
 HIST 395 History of Weapons and Firepower (3 credits)  
 INTL 311 Intel Successes and Failures (3 credits)  
 INTL 312 America's Drone Campaign Since 9/11 (3 credits)  
 INTL 402 The Military Instrument of Power (3 credits)  
 PSCI 231 Introduction to International Politics (3 credits)  
 PSCI 346 Multinational Peacekeeping (3 credits)  
 PSCI 348 Theories of Peace and War (3 credits)

### **Intelligence and Security Studies Courses**

INTL 201      *Introduction to Intelligence Studies*      Three Credit Hours

This course is a broad overview of the intelligence gathering and analysis as practiced by agencies of the United States government, to include its purpose, history, and potential benefits. The organizational makeup of the U.S. Intelligence Community (IC); the laws guidelines and ethics pertaining to intelligence collection; and employment/internship possibilities in the IC will also be presented. Finally, students will be given an introduction to analytical procedures and writing/briefing for policymakers.

INTL 210      *Homeland Security*      Three Credit Hours

An introduction to various aspects of terrorism and homeland security as both affect the United States today. Much of the focus will concern the problems and challenges stemming from 9/11 that create today's world situation. To understand what is going on currently, the course will examine the historical context of both terrorism and national security as it relates to terrorism.

INTL 301      *Advanced Analytics I*      Three Credit Hours

Prerequisite: INTL 201 or permission of Instructor

Students learn about the challenges inherent in analytics and methodologies used to overcome biases and present findings in a meaningful way. The course is designed to acquaint students with methods to maximize analytical rigor and provide policymakers with the intelligence necessary for them to make decisions under conditions of uncertainty and ambiguity. Emphasis is placed on working through case studies and developing writing and briefing skills.

INTL 302      *Advanced Analytics II*      Three Credit Hours

Prerequisite: INTL 301 or permission of Instructor

Students continue to learn about the challenges inherent in analytics and methodologies used to overcome biases and present findings in a meaningful way. The course is designed to acquaint students with methods to maximize analytical rigor and provide policymakers with the intelligence necessary for them to make decisions under conditions of uncertainty and ambiguity. Emphasis is placed on working through case studies and developing writing and briefing skills.

INTL 310      *Intelligence Collection Systems*      Three Credit Hours

This is a seminar course addressing intelligence collection systems and programs. Particular emphasis will be placed on intelligence collection platforms, their limitations and capabilities, and how they are used in support

of national intelligence requirements. The course will also focus on how these systems and programs are planned and executed. The seminar format will emphasize student participation in the form of presentations, papers, and related discussion.

INTL 311 *US Intelligence Successes and Failures* Three Credit Hours

This course will examine a number of cases that aptly demonstrate the underlying operational, analytic and managerial “hows and whys” of US intelligence success and failure. Reading material will include formal Congressional inquiries, declassified official “lessons learned”, unclassified articles by former practitioners, select media commentaries, and a few academic papers. The course will conclude with an examination of the various efforts at reform, some of which have fundamentally transformed the American Intelligence Community and others that have fallen short of effecting real change.

Case studies will highlight and explore the various “Ingredients for Intelligence Success” including: effective management structures and organization, well-honed collection programs and skills, well-honed analytic skills and analytic rigor, professional attentiveness and persistence, ingrained organizational cooperation, effective interagency communication and information sharing, sufficiently dedicated resources, and well-developed target understanding (via in-depth study).

INTL 312 *America's Drone Campaign Since 9/11* Three Credit Hours

Drones are used by both the civilian and military intelligence community as a new weapon in the fight against international terror. They serve as both collection platforms (Signals and Geospatial Intelligence) and weapons delivery systems. In this course, students will learn about the development and history of drones, their operational and tactical employment, and how they have changed the face of war. We will also explore the legal and ethical ramifications of their use against military targets and terrorists.

INTL 401 *Intelligence Support to Military Operations* Three Credit Hours

Since the days of Sun Tzu, intelligence collection and analysis has provided “decision advantage” to military commanders at both the tactical and strategic levels. In today’s complex battle space, good intelligence often spells the difference between victory and defeat. In this course, students will learn the importance of intelligence for the warfighter, the myriad collection techniques available today, and evolving doctrine as it relates to the collection and analysis of intelligence (e.g., the use of drones).

INTL 402 *The Military Instrument of Power* Three Credit Hours

A nation employs four instruments of power in order to achieve its strategic ends—Diplomacy (Political), Information, Military, and Economic. Often referred to as the DIME, these instruments provide a nation’s national leadership with a variety of unique capabilities that, when properly synchronized with one another, can support a national strategy. The purpose of this course is to improve the student’s fluency of the military instrument of power. We will investigate the range of considerations for the employment of military power once the decision has been made to do so. Thus, the goal of this class is to appreciate the theory, capabilities, and limitations for the employment of the military instrument of power and the role played by strategic and operational intelligence in the planning for and employment of military force.

INTL 464 *Intelligence Internship* Three Credit Hours

Prerequisite: Permission of Instructor

This course gives Intelligence and Security Studies students’ real-world work experience to complement the classroom education that they have previously received. Interns will learn about the variety of issues facing today’s intelligence community. Interns will receive three credits for every 120 hours they have successfully completed. This course may be repeated once for a total of six credits.

INTL 465 *Special Topics in Intelligence* Three Credit Hours

Prerequisite: Permission of Instructor

An advanced seminar designed to examine in-depth topics in intelligence and security studies.

## Department of Modern Languages, Literatures and Cultures

Department Head: Toubiana

Professors: Andrade, Bahk, Skow, Toubiana, Urroz

Associate Professors: Emm, Fernández-Medina, Hellin-Garcia, Segle, Strobbe

Assistant Professors: Roca-Martinez, Smith, Tsai

Command of foreign languages, ever a component of traditional liberal-arts schooling, has become a vital asset in today's global society and economy. The ability to communicate effectively with the millions of non-English speakers in the realms of commerce, government, science, and the arts serves crucial national interests. Cultural sensitivity, heightened through language study, furthers our relations with the world.

The language courses of the core curriculum cultivate four basic skills—reading, writing, listening, and speaking—with emphasis on communicative proficiency. The language minor enhances competence in the basic skills and allows for specialization in business practice, contemporary society, or literature. The language major hones fluency and imparts a detailed knowledge of life and letters.

The major is most flexible and has proven a sound preparation for coveted duty assignments, choice career opportunities in both public and private sectors, and graduate study in philology, business, law, or medicine. Students who excel are eligible for induction into the following national honor societies: Pi Delta Phi (French), Delta Phi Alpha (German), and Sigma Delta Pi (Spanish).

Students may pursue a B.A. in Modern Languages with Teaching Specialization in French, German or Spanish. The curriculum provides a broad background in the specified language, culture and literature to prepare the student to teach at the secondary school level. The student must make a formal application for admission to the Zucker Family School of Education for the Internship in Teaching as outlined on page 187.

### Plan of Undergraduate Major

Thirty credit hours of coursework are required in one language at the 300- and 400-levels. For all majors these required courses include 301 and 302; for Spanish, these also include SPAN 305.

Language students pursuing a double major will have the opportunity to count 1 course (3 credit hours) from another department. This course should be related to the history, the civilization or the culture of the target language in which the student is majoring. The course must be approved by the Head

of the Department of Modern Languages, Literatures and Cultures. Therefore, after completion of the core-curriculum language requirement, at least 27 credit hours (9 courses) must be taken from the language major, and 3 credit hours (1 course) could be taken from outside the Department of Modern Languages, Literatures and Cultures.

Students who, through previous academic study or experience, are deemed qualified may bypass Elementary (101-102) and/or Intermediate (201-202) courses in their chosen language, provided that they pass the next higher level course with a C or better. Bypassed courses will be included on the Citadel transcript as if they had been completed at The Citadel on a Pass/Fail basis.

### The Minor in Chinese, French, German, or Spanish (Please refer to p. 127)

### The Minor in East Asian Studies (Please refer to p. 133)

### Credit and Scholarships for Study Abroad

The Citadel currently offers study-abroad programs in French and Spanish. Credit may be granted for courses in French, German, and Spanish taken abroad at other schools during the summer or the regular school year. The Albert E. Gurganus Summer Stipend (\$1,000), the Deutscher Brüderlicher Bund Scholarship (\$1,500), and the John Alexander Summer Scholarship (\$2,000) assist qualified German majors with summer-study projects in Europe. Monetary awards sponsored by the American Society of the French Legion of Honor may be available for qualified French majors and minors participating in The Citadel's Summer Study in France. Students who wish to study language abroad will be expected to show evidence of competence in the language classes they have completed. Such work must have prior approval from the Head of the Department of Modern Languages, Literatures and Cultures.

### Core Curriculum Language Requirement

Courses in languages must be taken consecutively. That is, a course numbered 101 precedes and is prerequisite to 102, 102 is prerequisite to 201, and 201 is prerequisite to 202. Graduation requirements in languages may be satisfied only by appropriate sequences of courses in the same language. Thus, French 101-102 must be followed by French 201-202 (not Chinese, German or Spanish 201-202) and so forth. A student who wishes to satisfy the language requirement with a language not offered by The Citadel may exempt this requirement by transferring in twelve hours of that language from an accredited institution.

### **Bypass Placement, Bypass Credit, and Waiver of the Language Requirement**

The Citadel requires four semesters of language study or its equivalent in the same language for all majors except engineering and education. Students who wish to continue a language studied in high school or elsewhere must take a placement test in the language. The placement test score determines the level at which the student will continue study of the language. Three credit hours will be awarded for each bypassed course if the student scores a grade of C or higher for the course into which he/she is placed.

For a student whose native language is not English, the language requirement at The Citadel is automatically waived, and the student is allowed to substitute general electives for the waived language courses. In order to receive exempt credit (courses given exempt credit appear in the transfer section of The Citadel transcript and meet hour requirements for graduation) for waived language courses, the student must complete at The Citadel, a regionally accredited institution, or an approved overseas institution, with a grade of “C” or higher, a course in the native language at the 202-level or above. If a course is completed at the 300-level or higher, twelve hours of exempt credit will be awarded. Students attending overseas institutions must have an official transcript mailed directly to The Citadel Registrar. A hand-carried transcript will not be accepted. In addition, any foreign transcript that is not accompanied by an English translation or does not contain a grade conversion scale showing U.S. grade equivalents will be sent to a professional credential-evaluation service at the expense of the student.

### **Special Courses**

JAPN 101/102 *Intensive Introduction to Japanese I and II* Six Credit Hours  
Prerequisite: CHIN, FREN, GERM, or SPAN 202

Development of basic practical communication through standard cognitive-code methodology. Daily study and practice of phonetics, orthography, vocabulary, grammar, syntax, idiom. Students will learn to pronounce, read, and write the two syllabaries (Hiragana and Katakana) and ca. 200 Chinese characters (Kanji).

KORE 101/102 *Intensive Introduction to Korean I and II* Six Credit Hours  
Prerequisite: CHIN, FREN, GERM, or SPAN 202

Development of basic practical communication through standard cognitive-code methodology. Daily study and practice of phonetics, orthography, vocabulary, grammar, syntax, idiom. Students will learn to pronounce, read, and write the Hangul phonetic alphabet.

MLNG 410 *European Literary Movements, 12th Century to 1789* Three Credit Hours

An extensive, in-depth survey of influential literary movements on the Continent, beginning with the High Middle Ages and early Italian Renaissance, continuing through the late Renaissance, the Golden Age in Spain, the Classical Age, up to the end of the Age of Enlightenment. While the focus of the course will be on major writers and representative works of each period (e.g., *La Chanson de Roland*, Boccaccio, Cervantes, Racine, Rousseau, Goethe), the significant intercultural borrowings and literary and artistic cross-fertilization among the intelligentsia of France, Germany, Italy, and Spain will be studied and put in their proper sociological contexts. No prerequisite.

MLNG 420 *European Literary Movements, 1789-Present* Three Credit Hours

This course begins at the dawn of the Romantic movement on the Continent and continues through the important movements of Realism, Naturalism, Symbolism, Surrealism, and Existentialism. Significant works of writers such as Hugo, Flaubert, Zola, Galdós, Rilke, Mann, Proust, D’Annunzio, Pirandello, Sartre, and Hesse, among others, will be studied against the background of their times. No prerequisite.

MLNG 455 *Theory and Practice of Foreign Language Teaching* Three Credit Hours

Prerequisite: Language teaching track students need the approval of the Dean of the Zucker Family School of Education

This course seeks to address the theory and practice of foreign language teaching. It is designed specially to help students who are interested in the teaching profession and becoming future language teachers. The aim is to develop understanding with the contemporary research-based views of language teaching and learning. Students will become familiar with professional organizations, language policies, foreign language national standards, and first and second language acquisition theories among others. Students will also learn how to incorporate different modes of communication, learning strategies and styles, and culture in the classroom. They will also reflect on how to address diverse needs such as motivation, aptitude, diversity and learning disabilities. Students will also design lesson plans and explore different assessment techniques to meet students’ needs and goals.

LING 300 *Introduction to Linguistics* Three Credit Hours  
Open to all students.

A survey of the history of languages and linguistics and a study of the components of human speech: phonetics, phonology, morphology; grammar, syntax, semantics; semiology, writing, literature. No prerequisite.

### Chinese Language Course Descriptions

CHIN 101 *Introduction to Chinese I* Three Credit Hours

This course is designed to introduce students to modern Mandarin Chinese. It begins with an introduction to the sound system of Mandarin Chinese (i.e., Pinyin) and then moves onto basic skills in listening, speaking, reading, and writing. The course also aims to introduce students to a variety of aspects of Chinese culture. By the end of the semester, students are expected to (a) have a fairly good pronunciation, (b) recognize and write approximately 200 to 250 characters, and (c) carry out simple conversations. Lab work required.

CHIN 102 *Introduction to Chinese II* Three Credit Hours

Prerequisite: CHIN 101 or placement

This course aims to further develop students' fundamental four language skills, which will be emphasized and learned in communicative contexts. Students are expected to actively participate in class by engaging in interactive activities, and reading and writing practices. A variety of aspects of everyday Chinese culture will be introduced through these activities. Lab work required.

CHIN 201 *Intermediate Chinese I* Three Credit Hours

Prerequisite: CHIN 102 or placement

This course is designed to help students reach intermediate-level communicative skill in spoken and written Chinese. It also aims to establish a solid base for more advanced language learning. By increasing students' vocabulary and knowledge of sentence patterns, the course focuses on speaking and writing in coherent and well-formed paragraphs. By the end of the semester, students are expected to (a) carry out fluent conversations about daily activities and (b) write compositions of 200 to 250 characters on subjects of their daily life and personal experiences. Lab work required.

CHIN 202 *Intermediate Chinese II* Three Credit Hours

Prerequisite: CHIN 201 or placement

This course provides intermediate-level training in spoken and written Chinese in cultural contexts, based on language skills developed in CHIN 201. The focus of this course is mainly on complex grammatical patterns, discourse characteristics, and discussions of various cultural topics.

CHIN 101/102 *Intensive Introduction to Chinese I and II* Six Credit Hours

Development of basic practical communication through standard cognitive-code methodology. Daily study and practice of phonetics, orthography, vocabulary, grammar, syntax, idiom. Students will learn to transcribe in Pinyin and pronounce all syllables of the phonetic system of Modern Standard Chinese (Mandarin in Beijing dialect) and to recognize and write ca. 500 characters.

CHIN 201/202 *Intensive Intermediate Chinese I and II* Six Credit Hours

Prerequisite: CHIN 102 (or equivalent)

Students continue to develop practical communication skills and use of basic structures through speaking, reading, writing, and listening. Daily study and practice of phonetics, orthography, vocabulary, grammar, syntax, idiom. The vocabulary for reading and writing increases to 1,000 characters.

CHIN 301 *Advanced Speaking, Reading, and Writing I* Three Credit Hours

Prerequisite: CHIN 202 (or equivalent)

Required course for all Chinese minors.

The aim of this course is to continually improve the students' reading, writing, speaking, and listening skills with extra emphasis placed on oral proficiency. It also intends to deepen students' knowledge of Chinese Language and Culture. Conversational skills are developed through frequent discussions and group related activities. Skills are refined through speaking and writing activities. Use of audiovisual materials; class taught in Chinese.

CHIN 302 *Advanced Speaking, Reading, and Writing II* Three Credit Hours

Prerequisite: CHIN 202 (or equivalent)

Required course for all Chinese minors.

Detailed study, analysis, and practice of written Chinese based upon selected texts. The aim of this course is to continually improve the students' reading, writing, speaking, and listening skills with extra emphasis placed on writing proficiency. It also intends to deepen students' knowledge of the Chinese Language and Culture. Use of audiovisual materials; class taught in Chinese.

CHIN 303 *Chinese Civilization* Three Credit Hours

Prerequisite: CHIN 202

A broad survey of Chinese civilization and society with emphasis on values, thought, institutions, and art through selected topics that link various periods in China's past with the present. By the end of this course, students will have a better knowledge and comprehension of Chinese history and society and will be able to define the conceptions through which the Chinese have identified their cultural heritage. Use of audiovisual materials; class taught in Chinese

CHIN 307 *Business Chinese* Three Credit Hours

Prerequisite: CHIN 202

Introduction to the language and culture of economics, banking, commerce, sales, import-export, and corporations in the Chinese speaking world. The course is designed to simulate real business environments. By the end of the semester, students will have a basic knowledge of how to function in the business Chinese world. Use of audiovisual materials; class taught in Chinese



CHIN 450 *Undergraduate Seminar: Studies in Special Topics* Three Credit Hours  
Prerequisite: CHIN 202

A comprehensive study and interpretation of a major author, work, period, movement or some other literary, linguistic, or cultural topic. This course may be repeated provided that the subtitle is not duplicated. Class taught in Chinese

**Language and literature courses numbered 300 and above in a given language have, unless otherwise stated, 202 or 204 in that language as a prerequisite.**

### French Language and Literature Course Descriptions

FREN 101 *Elementary French Communication I* Three Credit Hours

Basic functional communication on daily activities and immediate environment in the present. Emphasis on understanding, speaking, reading, and writing simple French; pronunciation; and vocabulary expansion. Cross-cultural similarities and differences stressed. Course conducted primarily in French. *Language laboratory required.*

FREN 102 *Elementary French Communication II* Three Credit Hours

Prerequisite: FREN 101 or placement  
Continued development of basic communication skills: understanding, speaking, reading, and writing in increasingly more complex situations, including pronouns, descriptions, and actions in the past and future, and conjectures. Cross-cultural similarities and differences also studied. Course conducted primarily in French. *Language laboratory required.*

FREN 201 *Intermediate French Communication* Three Credit Hours

Prerequisite: FREN 102 or placement  
Functional use of French in different sociocultural contexts. Extensive oral and written practice with vocabulary and structures vital to expressing increasingly complex ideas. Course conducted in French. *Language laboratory required.*

FREN 202 *French Reading, Conversation, and Composition* Three Credit Hours

Prerequisite: FREN 201 or placement  
Systematic development of reading and writing skills through cultural and literary texts. Oral communication skills development through discussions of readings and audiovisual material. Course conducted in French.

FREN 203 *Intermediate French Composition and Conversation* Three Credit Hours

Prerequisite: FREN 102 (or equivalent) and permission of instructor  
An intensive, systematic study of grammar and development of speaking and writing skills through readings, discussions, and compositions. May be taken in lieu of FREN 201. Offered only during summer program in Europe.

FREN 204 *Intermediate French Culture* Three Credit Hours

Prerequisite: FREN 102 (or equivalent) and permission of instructor  
Participation in cultural activities (excursions, visits to museums, theatrical performances, movies, etc.) required. Weekly journal of cultural and cross-cultural experiences. May be taken in lieu of FREN 202. Offered only during summer program in Europe.

FREN 301 *Advanced French Conversation* Three Credit Hours

Prerequisite: FREN 202  
Development of skill and ease in speaking correct, idiomatic French at an advanced level. Audio and video cassettes used for aural comprehension. Pronunciation exercises. Not open to students with native-level proficiency, but required of all French majors and minors.

FREN 302 *Advanced French Composition* Three Credit Hours

Prerequisite: FREN 202  
Detailed study, analysis, and practice of written French based upon selected texts. Study of grammar, syntax, and vocabulary as necessary to achieve coherent, idiomatic compositions related to the readings. Required of all French majors and minors.

FREN 303 *French Civilization* Three Credit Hours

Prerequisite: FREN 202  
A broad survey of French culture (architecture, painting, sculpture, music, cuisine, etc.) and society from prehistoric times to World War I.

FREN 304 *Survey of Non-European Francophone Literature and Civilization* Three Credit Hours

Prerequisite: FREN 202  
A survey of Canadian, African and Caribbean Francophone literature and civilization from early twentieth century to the present.

FREN 307 *Business French* Three Credit Hours

Prerequisite: FREN 202 or permission of instructor  
Introduction to the language of economics, banking, commerce, correspondence, sales, import-export, transportation, and corporations in the French-speaking world.

FREN 390 *Special Topics in Contemporary French Culture* Three Credit Hours

Prerequisite: FREN 202 and permission of instructor  
A survey of current trends in art, architecture, music, cuisine, film, and literature, as well as in popular culture, in France. Visits to museums, concerts, theater, etc. Weekly journal of cultural and cross-cultural experiences. Offered only during summer program in Europe.

- FREN 391 *Special Topics in Contemporary French Usage* Three Credit Hours  
Prerequisite: FREN 202  
A course designed to acquaint students with the French of today as a language in evolution; particular attention to current usage of slang, jargon, and neologisms. Offered only during summer program in Europe.
- FREN 421 *French Literature of the Middle Ages and Renaissance* Three Credit Hours  
Prerequisite: FREN 202  
A study of representative works composed in the Middle Ages and Renaissance in modern French translation.
- FREN 422 *French Classicism and Enlightenment* Three Credit Hours  
Prerequisite: FREN 202  
A study of the principal writers of the seventeenth and eighteenth centuries in France. Major figures: Molière, Corneille, Racine, Pascal, La Fontaine, La Bruyère, Voltaire, Diderot, Rousseau.
- FREN 423 *French Literature of the Nineteenth Century* Three Credit Hours  
Prerequisite: FREN 202  
A study of the works representative of Romanticism, Realism, Naturalism, and Symbolism, with special emphasis on developments in the novel and lyric poetry.
- FREN 424 *French Literature of the Twentieth Century* Three Credit Hours  
Prerequisite: FREN 202  
A study of the major writers and literary movements—Surrealism, Modernism, Existentialism, Theatre of the Absurd, Nouveau Roman—from the early 1900s through the twentieth century.
- FREN 450 *Undergraduate Seminar: Studies in Special Topics* Three Credit Hours  
Prerequisite: FREN 202  
Investigation and analysis of the works of one notable French author or of some other literary, linguistic, or cultural topic. The significance of the topic studied to Francophone civilization and/or literature in general will be emphasized. This course may be repeated provided that the subtitle is not duplicated.
- FREN 490 *Advanced Grammar, Syntax, and Translation* Three Credit Hours  
Prerequisite: FREN 302 or permission of instructor  
Development of linguistic skills necessary for fluent idiomatic writing in French, from colloquial to more sophisticated styles, including translation from English to French.

### German Language and Literature Course Descriptions

- GERM 101 *Elementary German I* Three Credit Hours  
Introduction to vocabulary, grammar, syntax, idiom, and culture. Development of skills critical to foreign-language mastery: listening, speaking, reading, and writing. Course conducted primarily in German. Lab work required.
- GERM 102 *Elementary German II* Three Credit Hours  
Prerequisite: GERM 101 or placement  
Progress in vocabulary, grammar, syntax, and idiom. Increased emphasis on student communication. Course conducted primarily in German. Lab work required.
- GERM 201 *Intermediate German I* Three Credit Hours  
Prerequisite: GERM 102 or placement  
Completion of basic grammar and syntax. Increased emphasis on reading, idiomatic usage. Course conducted in German. Lab work required.
- GERM 202 *Intermediate German II* Three Credit Hours  
Prerequisite: GERM 201 or placement  
Expansion and fine tuning of grammar. Literary texts serve as basis for discussion and substantial composition. Course conducted in German. Upon successful completion of the elementary and intermediate courses, students will be functional in a German-speaking country, i.e., able to converse socially, read newspapers and magazines, enjoy a movie, etc.
- GERM 203 and *Intermediate German I Abroad* Three Credit Hours  
GERM 204 *Intermediate German II Abroad* Each Semester  
Prerequisite: GERM 102 (or equivalent) and permission of section chief  
Taken in lieu of GERM 201 and 202. Intensive study of grammar, development of communicative skills while in residence in Germany, Austria, or Switzerland.
- GERM 301 *Advanced German Conversation* Three Credit Hours  
Prerequisite: GERM 202/204 with a grade of “C” or better or permission of the department head  
Not open to students with native-level proficiency, but required of all German majors and minors. Expansion and practice of communicative skills in situational contexts from colloquial to formal. Extensive use of sound and video recordings. Student interviews and presentations.
- GERM 302 *Advanced German Composition* Three Credit Hours  
Prerequisite: GERM 202/204 with grade of “C” or better or permission of department head  
Required of all German majors and minors. Practice in formal writing: reviews, essays, correspondence. Study of styles of writing in exemplary texts. Practical experience with translation.

- GERM 303 *German Civilization and Culture* Three Credit Hours  
Prerequisite: GERM 202/204 with grade of “C” or better or permission of department head  
Survey of civilization and culture up to 1945, with emphasis on values, thought, institutions, and art. Films, slides, recordings.
- GERM 304 *Postwar German Society and Culture* Three Credit Hours  
Prerequisite: GERM 202/204 with grade of “C” or better or permission of department head  
Study of society and culture since 1945, focusing on political division and reunification, economy, and art (particularly film).
- GERM 305 *Events and Issues in German Media and Popular Culture* Three Credit Hours  
Prerequisite: GERM 202/204 with grade of “C” or better or permission of department head  
An intensive study of events and issues as reflected in German media and popular culture. Newspapers, magazines, web sites, film, television, radio, music provide students with German perspective on major events in twentieth century world history. Topics will vary but may include WWI, National Socialism, the Holocaust, the Vietnam War, the Cold War, Divided Germany, and the Environment.
- GERM 306 *Encountering Cultural Texts: German for Discussion and Critique* Three Credit Hours  
Prerequisite: GERM 202 or permission of the instructor  
This course focuses on advanced language skills for higher-order thinking in German. Students will read, analyze, discuss and write about concrete and abstract themes encountered in diverse genres, modes and styles of representation. The course provides experience with a broad array of German-language literary and cultural texts that may include literature, opera, film and non-fiction. Recommended as preparation for 400-level German courses. Taught in German.
- GERM 307 *Business German: Practical Applications* Three Credit Hours  
Prerequisite: GERM 202/204 with grade of “C” or better or permission of department head  
Serves as a business elective. Acquisition of practical knowledge of German industry and economics. Study and practice of related vocabulary, and the fundamentals of business correspondence. Preparation for the *Zertifikat Deutsch für den Beruf*, an internationally recognized business German exam.
- GERM 308 *Business German: Current Issues* Three Credit Hours  
Prerequisite: GERM 202/204 with grade of “C” or better or permission of department head  
Study of current issues in the German business world through extensive readings using the internet and current business publications. Practice in business correspondence and business situations. Preparation for the *Zertifikat Deutsch für den Beruf*, an internationally recognized business German exam.

- GERM 390 *Special Topics in Language and Literature* Three Credit Hours  
Prerequisite: GERM 202/204 and permission of section chief  
Study of language and literature while in residence in Germany, Austria, or Switzerland. Emphasis on current usage in speech and print. Discussion and composition based on activities and readings.
- GERM 391 *Special Topics in Landeskunde* Three Credit Hours  
Prerequisite: GERM 202/204 and permission of section chief  
Study of society and culture while in residence in Germany, Austria, or Switzerland. Emphasis on interaction with host community. Theater, concerts, films, excursions, and museum visits. Special projects tailored to student need and interest.
- GERM 421 *German Literature up to the Reformation* Three Credit Hours  
Prerequisite: GERM 202/204 with grade of “C” or better or permission of department head  
Survey of significant authors, works, genres, and movements from the earliest monastic texts through Luther’s age, examined in their social and cultural context.
- GERM 422 *German Literature from the Baroque to Classicism* Three Credit Hours  
Prerequisite: GERM 202/204 with grade of “C” or better or permission of department head  
Survey of significant authors, works, and genres from the period of the baroque, the Enlightenment, *Sturm und Drang*, and classicism.
- GERM 423 *German Literature of the Nineteenth Century* Three Credit Hours  
Prerequisite: GERM 202/204 with grade of “C” or better or permission of department head  
Survey of significant authors, works, genres, and movements, with emphasis on romanticism, *Biedermeier*, *Junges Deutschland*, poetic realism, and naturalism.
- GERM 424 *German Literature of the Twentieth Century* Three Credit Hours  
Prerequisite: GERM 202/204 with grade of “C” or better or permission of department head  
Study of select authors, e.g., Schnitzler, Thomas Mann, Brecht, Grass, and Plenzdorf.
- GERM 426 *Modern Austrian Literature* Three Credit Hours  
Prerequisite: GERM 202/204 with grade of “C” or better or permission of department head  
Survey of select authors since 1900, e.g. Bachmann, Bernhard, Musil, Frischmuth, Jelinek.

GERM 427 *Literature of German-Speaking Switzerland* Three Credit Hours

Prerequisite: GERM 202/204 with grade of “C” or better or permission of department head

Survey of select authors, e.g. Gotthelf, Keller, Meyer, Frisch, Dürrenmatt, Muschg, Bichsel.

GERM 450 *Undergraduate Seminar: Studies in Special Topics* Three Credit Hours

Prerequisite: GERM 202/204 with grade of “C” or better or permission of department head

Study of a single author or select topic in Germanic philology or culture. Students may register for this course more than once if the topic has changed.

GERM 490 *Internship in German Language and Culture* Three Credit Hours

Prerequisite: GERM 202/204 with grade of “C” or better or permission of department head

Internships or service opportunities with local entities (e.g., businesses, government agencies, non-profit organizations) or in German-speaking countries to combine academic training with professional experience. This course may be taken more than once.

### Spanish Language and Literature Course Descriptions

SPAN 101 *Elementary Spanish Communication I* Three Credit Hours

Emphasis on practical, oral communication. Basic elements of speaking, listening, reading, and writing. Initial presentation of Hispanic culture. Mandatory practice in the language laboratory. Course conducted primarily in Spanish.

SPAN 102 *Elementary Spanish Communication II* Three Credit Hours

Prerequisite: SPAN 101 or placement

Further emphasis on oral communication. A continuation of speaking, listening, reading, and writing skills and study of Hispanic culture. Mandatory practice in the language laboratory. Course conducted primarily in Spanish.

SPAN 201 *Intermediate Spanish Communication* Three Credit Hours

Prerequisite: SPAN 102 or placement

Stress on oral communication. A continuation of speaking, listening, reading, and writing skills and study of Hispanic culture. Completion of the verb system. Mandatory practice in the language laboratory. Course conducted primarily in Spanish.

SPAN 202 *Spanish Conversation, Reading, and Composition* Three Credit Hours

Prerequisite: SPAN 201 or placement

Extensive oral and written communication based on readings and videos of Hispanic literature and culture. Course conducted primarily in Spanish.

SPAN 203 *Intermediate Spanish Composition and Conversation* Three Credit Hours

Prerequisite: SPAN 102 (or equivalent) and permission of instructor

Intensive course in oral and written Spanish; to be taken in lieu of SPAN 201. Offered only during Maymester or summer program in Spain or Spanish America.

SPAN 204 *Intermediate Hispanic Culture* Three Credit Hours

Prerequisite: SPAN 201 (or equivalent) and permission of instructor

Participation in cultural activities (excursions, visits to museums, theatrical performances, bullfights, etc.) required. Weekly journal of cultural and cross-cultural experiences. Taken in lieu of SPAN 202. Offered only during Maymester or summer program in Spain or Spanish America.

SPAN 301 *Advanced Spanish Conversation* Three Credit Hours

Prerequisite: SPAN 202

Conversational skills are developed through frequent discussions and group related activities, with an emphasis on oral proficiency. These skills will be further refined through frequent writing activities. Course conducted in Spanish. Not open to students with native-level proficiency, but required of all other Spanish majors and minors.

SPAN 302 *Advanced Spanish Composition* Three Credit Hours

Prerequisite: SPAN 202

An intense and complete overview of Spanish grammar including a review of all tenses and a thorough analysis of the subjunctive. These elements will be emphasized through frequent writing exercises, with the ultimate goal of producing grammatically correct Spanish. Course conducted in Spanish. Required of all Spanish majors and minors.

SPAN 303 *Readings in Spanish Civilization* Three Credit Hours

Prerequisite: SPAN 202

A broad survey of the culture of Spain (architecture, painting, sculpture, music, cuisine, etc.) and society from prehistoric times to the present. Use of audiovisual materials.

SPAN 304 *Readings in Spanish American Civilization* Three Credit Hours

Prerequisite: SPAN 202

A general survey of the culture of Spanish America from pre-Columbian times to the present (architecture, painting, sculpture, music, cuisine, etc., as well as social and political developments). Use of audiovisual materials.

SPAN 305 *Introduction to the Study of Hispanic Literature* Three Credit Hours

Prerequisites: Completion of SPAN 202 or 204 and SPAN 302

A preparatory course for students intending to pursue studies in Hispanic literature. Selected readings will provide the basis for stylistic and textual analysis and understanding of the structure of literary works. The historical development of genres and the technical vocabulary necessary for critical analysis will be included. Required of all Spanish majors and minors.

SPAN 306 *Medical Spanish* Three Credit Hours  
Prerequisites: SPAN 202

Introduction to the study of specific medical Spanish vocabulary and terminology related to the field of medicine and cultural issues related to communicative interactions with Spanish-speaking patients in a clinical setting. This course is specially geared to develop students' communication skills for serving in the medical profession. The course explores real-life situations that medical personnel might encounter such as patient-doctor interviews, health issues, general check-ups, physical examinations, medical emergencies, etc. The course will also explore Hispanic cultural perspectives, practices and products related to healthcare. It will help students to develop intercultural communicative competence to better interact with and assist the Hispanic community. This course is especially recommended for students who will be working in the field of medicine.

SPAN 307 *Business Spanish* Three Credit Hours  
Prerequisites: Completion of SPAN 202 or 204 and SPAN 302

Introduction to the language and culture of economics, banking, commerce, sales, import-export, and corporations in Spain and Spanish America.

SPAN 308 *Spanish Business Correspondence* Three Credit Hours  
Prerequisites: Completion of SPAN 202 or 204 and SPAN 302

An extensive overview and practice of written commercial communications in Spanish.

SPAN 309 *Spanish for Law Enforcement* Three Credit Hours  
Prerequisites: Completion of SPAN 202 or 204 and SPAN 302

Introduction to the study of the Spanish language and culture specifically related to the law enforcement field. This course explores real-life situations that law enforcement personnel might encounter such as robberies, assault, crime scenes, emergency situations, domestic violence, neighborhood security, etc. Especially recommended for students who will be working in law enforcement.

SPAN 310 *Survey of Spanish Peninsular Literature* Three Credit Hours  
Prerequisite: SPAN 302

A broad survey of literature in Spain from the early medieval period through major movements and representative authors to contemporary Spanish letters.

SPAN 320 *Survey of Spanish American Literature* Three Credit Hours  
Prerequisite: SPAN 302

A broad survey of major works of Spanish America from the pre-Columbian period through major movements and representative authors to contemporary literature.

SPAN 420 *Medieval Spanish Literature* Three Credit Hours  
Prerequisite: SPAN 302

A survey of the most prominent literary works in Spain from the early medieval period to the Renaissance.

SPAN 421 *The Golden Age of Spanish Literature* Three Credit Hours  
Prerequisite: SPAN 302

A study of the theatre, poetry and narrative of Spain's Golden Age.

SPAN 423 *Eighteenth and Nineteenth Century Literature of Spain* Three Credit Hours

Prerequisite: SPAN 302

A survey of major literary trends from Neoclassicism to the Generation of '98. Corresponding Spanish history will be presented as part of textual interpretation.

SPAN 424 *Contemporary Spanish Narrative* Three Credit Hours  
Prerequisite: SPAN 302

Literary trends in Spain since 1900.

SPAN 425 *Contemporary Spanish American Fiction* Three Credit Hours  
Prerequisite: SPAN 302

In-depth study of the major works of Spanish American fiction by the most important twentieth-century writers. Consideration will be given to Borges, Cortázar, Rulfo, Fuentes, and García Márquez.

SPAN 426 *Contemporary Spanish American Poetry* Three Credit Hours  
Prerequisite: SPAN 302

A study of selected Spanish American poets from Modernism to the contemporary period. The course will consider authors such as Dario, Mistral, Vallejo, Neruda, and Octavio Paz.

SPAN 427 *19<sup>th</sup> Century Spanish American Literature* Three Credit Hours  
Prerequisite: SPAN 302

An in-depth reading of the major Spanish American authors from the period of independence to *Modernismo*.

SPAN 428 *Contemporary Spanish Poetry* Three Credit Hours  
Prerequisite: SPAN 302

Trends in Spanish poetry since 1900.

SPAN 450 *Undergraduate Seminar: Studies in Special Topics* Three Credit Hours

Prerequisite: SPAN 302

A comprehensive study and interpretation of a major author, work, period, movement—or combination thereof—from Spain or Spanish America. This course may be repeated provided that the subtitle is not duplicated.

SPAN 460 *Internship in Hispanic Language and Culture* Three Credit Hours

Prerequisite: SPAN 302 and permission of department head and internship director

Internships with local entities (e.g., businesses, government agencies, non-profit organizations, etc.) may be periodically offered to combine academic training with professional experience.

### Directed Individual Study

Directed Individual Study courses enable students with special interests, suitable preparation, and high academic standing to receive instruction and guidance in selected subjects which are not otherwise treated in the department's regularly scheduled courses of instruction. Directed Individual Study courses may not be repeated and are open only to juniors and seniors with the assent of the instructor and the permission of the department head.

CHIN 341 and CHIN 342	<i>Chinese Language and Literature</i> (junior year)	Three Credit Hours Each Semester
CHIN 441 and CHIN 442	<i>Chinese Language and Literature</i> (senior year)	Three Credit Hours Each Semester
FREN 341 and FREN 342	<i>French Language and Literature</i> (junior year)	Three Credit Hours Each Semester
FREN 441 and FREN 442	<i>French Language and Literature</i> (senior year)	Three Credit Hours Each Semester
GERM 341 and GERM 342	<i>German Language and Literature</i> (junior year)	Three Credit Hours Each Semester
GERM 441 and GERM 442	<i>German Language and Literature</i> (senior year)	Three Credit Hours Each Semester
SPAN 341 and SPAN 342	<i>Spanish Language and Literature</i> (junior year)	Three Credit Hours Each Semester
SPAN 441 and SPAN 442	<i>Spanish Language and Literature</i> (senior year)	Three Credit Hours Each Semester

## Department of Political Science

Department Head: Kapeluck

John C. West Chair: Factor

Citadel Fellow: Fowler

Professors: Buchanan, Hines, Kapeluck, Mays

Associate Professors: Porter, Tenney

Assistant Professors: Segrest, Sun

Instructor: Collins

The Department offers an academic major in political science. This major affords students an opportunity to obtain a broad liberal arts education that enriches their lives and acquaints them with the rights and responsibilities of citizenship. The course of study for students majoring in political science begins with a set of core courses to introduce the student to the discipline. Students then have the opportunity to select from a list of specialized electives in their area of concentration and to increase their understanding of their field by taking courses in the related disciplines of anthropology, criminal justice, economics, history, psychology, and sociology as well as General Electives from other departments. As the central element of a general education, political science provides preparation for graduate education and for useful and satisfying careers.

**Political Science Major:** The course of study for students majoring in political science prescribes a set of core courses to introduce the student to the discipline. In addition, each major must select one of the following departmental subfields for specialization in the junior and senior years.

- A. American Government and Politics.
- B. International Politics and Military Affairs.
- C. Pre-Law and Legal Studies.

The discipline of political science seeks to describe and to explain political phenomena, including both foreign and domestic political institutions, the political process, political behavior, and contemporary political and security issues. Political science also studies the relationships of individuals with their governments, including the rights and responsibilities of citizens. The major has especially strong appeal for those who anticipate careers in law and government, particularly in the Foreign Service, Department of Homeland Security and Department of State, intelligence agencies, the military services of the US Army, US Navy, US Air Force, and US Coast Guard, as well as a broad range of ancillary civilian and government organizations.

**Other Programs and Courses:** The Department offers four minors: Non-Western Studies, American Politics, International and Military Affairs, and Law and Legal Studies. The Department also participates in the college's interdisciplinary minors in African-American Studies, International Criminal Justice, International Relations, Southern Studies, Leadership Studies, and East-Asian Studies. For a full description of these minor programs, please refer to the appropriate entries in this catalog: Department of Criminal Justice - International Criminal Justice; Department of English - Leadership Studies; Department of History - African-American Studies, International Relations, and Southern Studies; Department of Modern Languages, Literatures and Cultures - East Asian Studies. The Department also offers two courses (PSCI 102: American Government and ANTH 202: Cultural Anthropology) that may satisfy the core curriculum's social science requirement in many majors.

### Major Requirements: B.A. in Political Science

The political science major consists of seventeen courses (51 credit hours), mostly within the department but including as well a mix of humanities and social science courses (with the exact mix depending on the subfield the student selects). In addition, it provides for seven elective courses which students may take as they choose. The complete course of study is presented in the Courses of Study section of this catalog.

First, each student is required to complete a specified core of six courses:

- PSCI 101 Introduction to Political Science
- PSCI 102 American National Government
- PSCI 231 International Politics
- PSCI 232 Comparative Politics
- PSCI 304 American Political Thought or PSCI 391, Foundations of Political Theory; PSCI 392, Modern Political Theory or PSCI 492, Topics in Political Philosophy and Theory
- PSCI 462 Constitutional Law: Civil Rights and Liberties.

Second, no later than the beginning of the fall semester of the junior year, each political science major must select one of the subfields for course concentration during the junior and senior years. The three subfields are **Subfield A: American Government and Politics, Subfield B: International Politics and Military Affairs, and Subfield C: Pre-Law and Legal Studies.** Majors must complete selected courses within one subfield of their choice. As detailed below, three of these courses are specifically required; the remaining courses are a combination of subfield electives selected from a list for each subfield, American Politics electives (see the electives list for Subfield A), political science electives, a non-PSCI humanities/social science upper level elective, history electives, and macroeconomics (for Subfields A and C only). Inasmuch

as subfield requirements vary, students are encouraged to pay careful attention to the distribution of courses in the subfield selected.

All courses within a subfield are open both to majors in other departments and to political science majors who are concentrating in one of the other two subfields. Subfield requirements and electives are presented below.

### Subfield A: American Government and Politics

#### JUNIOR YEAR

##### First Semester

American Parties & Politics, PSCI 301  
History Elective  
Subfield Elective  
Biology, Chemistry, or Physics

BADM 201

ROTC

LDRS 311

#### SENIOR YEAR

##### First Semester

Pol. Issues & Public Policy, PSCI 401  
Subfield Elective

Constitutional Law, PSCI 462

Elective

Elective

ROTC

LDRS 411

##### Required:

- PSCI 301 American Parties and Politics
- PSCI 302 Urban Politics or PSCI 306: Legislative Process
- PSCI 401 Political Issues and Public Policy

Subfield electives (those students selecting this subfield must complete at least three electives chosen from the following):

- PSCI 303 State and Local Government
- PSCI 304 American Political Thought
- PSCI 305 American Presidency
- PSCI 306 Legislative Process
- PSCI 307 Southern Politics
- PSCI 308 Public Opinion
- PSCI 310 Domestic Terrorism
- PSCI 311 The Civil Rights Movement and American Politics

##### Second Semester

Urban Politics, PSCI 302 or  
Legislative Process, PSCI 306  
History Elective  
Theory: PSCI 304, 391, 392, or  
492

Biology, Chemistry, or Physics  
Elective

ROTC

##### Second Semester

Subfield Elective  
Non-PSCI Humanities/Social  
Science Elective

Political Science Elective

Elective

Elective

ROTC

PSCI 371 Leadership in Politics  
 PSCI 393 Research Methods in Political Science  
 PSCI 396 Politics and the Media  
 PSCI 402 Politics of Bureaucracy  
 PSCI 403 Topics in American Government and Politics  
 PSCI 431 American Foreign Relations  
 PSCI 461 Issues in Contemporary Constitutional Law  
 PSCI 498 Independent Study  
 PSCI 499 Internship  
 FREN 301 or GERM 301 or SPAN 301 or CHIN 301

### Subfield B: International Politics and Military Affairs

#### JUNIOR YEAR

##### First Semester

Subfield Elective  
 History Elective  
 American Politics Elective

Biology, Chemistry, or Physics  
 Internat. Political Economy, PSCI 351  
 ROTC  
 LDRS 311

##### Second Semester

Nat. Security Pol., PSCI 332  
 History Elective  
 Theory: PSCI 304, 391, 392, or  
 492

Biology, Chemistry, or Physics  
 Elective  
 ROTC

#### SENIOR YEAR

##### First Semester

Am. Foreign Relations, PSCI 431  
 American Politics Elective  
 Constitutional Law, PSCI 462

Elective  
 Elective  
 ROTC  
 LDRS 411

##### Second Semester

Int. Politics Elective  
 Int. Politics Area Elective  
 Non-PSCI Humanities/Social  
 Science Elective

Elective  
 Elective  
 ROTC

#### Required:

PSCI 332 National Security Policy  
 PSCI 351 Internat. Political Economy  
 PSCI 431 American Foreign Policy

Subfield electives (those selecting this subfield must complete at least two electives chosen from any of the American government and politics courses listed above plus three subfield electives chosen from the following, one of which must be an area course):

PSCI 310 Domestic Terrorism  
 PSCI 331 International Law  
 PSCI 333 International Organization

PSCI 335 Comparative Foreign and Defense Policies  
 PSCI 336 Russia and the Commonwealth of Independent States  
 PSCI 337 East Asian Affairs  
 PSCI 338 Southeast Asian Affairs  
 PSCI 339 Middle Eastern Affairs  
 PSCI 340 Latin American Affairs  
 PSCI 341 African Affairs  
 PSCI 342 International Terrorism  
 PSCI 343 Introduction to Non-Western Studies  
 PSCI 344 European Affairs  
 PSCI 345 South Asian Affairs  
 PSCI 346 Multinational Peacekeeping  
 PSCI 348 Theories of Peace and War  
 PSCI 352 Global Democracy  
 PSCI 353 International Economic and Development Institutions  
 PSCI 371 Leadership in Politics  
 PSCI 393 Research Methods in Political Science  
 PSCI 402 Politics of Bureaucracy  
 PSCI 433 Topics in International Politics  
 PSCI 498 Independent Study  
 PSCI 499 Internship  
 CRMJ 384 International Crime  
 FREN 301 or GERM 301 or SPAN 301 or CHIN 301

### Subfield C: Pre-Law and Legal Studies

#### JUNIOR YEAR

##### First Semester

Intro to Criminal Justice, CRMJ 201  
 History Elective  
 American Politics Elective

Biology, Chemistry, or Physics  
 BADM 201  
 ROTC  
 LDRS 311

##### Second Semester

Law & Legal Process, PSCI 361  
 History Elective  
 Theory: PSCI 304, 391, 392, or  
 492

Biology, Chemistry, or Physics  
 Elective  
 ROTC

#### SENIOR YEAR

##### First Semester

Constitutional Law, PSCI 462  
 Pre-Law & Legal Studies Elective  
 American Politics Elective

Elective  
 Elective  
 ROTC  
 LDRS 411

##### Second Semester

Constitutional Law, PSCI 461  
 Pre-Law & Legal Studies Elective  
 Non-PSCI Humanities/Social  
 Science Elective

Elective  
 Elective  
 ROTC



*Required:*

CRMJ 201	Introduction to Criminal Justice
PSCI 361	Law and Legal Process
PSCI 461	Issues in Contemporary Constitutional Law

Subfield electives (those selecting this subfield must complete at least two electives chosen from any of the American government and politics courses listed above plus two subfield electives chosen from the following):

PSCI 304	American Political Thought
PSCI 311	The Civil Rights Movement and American Politics
PSCI 331	International Law
PSCI 393	Research Methods in Political Science
PSCI 402	Politics of Bureaucracy
PSCI 463	Topics in Law and Legal Studies
PSCI 498	Senior Research Project/Independent Study
PSCI 499	Internship
SOCI 201	Introduction to Sociology
CRMJ202	Criminology
CRMJ371	Criminal Law
CRMJ373	Criminal Evidence
CRMJ465	Special Topics in Criminal Justice
ENGL411	Writing in the Professions
BADM 211	Accounting Principles and Practice
FREN 301 or GERM 301 or SPAN 301 or CHIN 301	

**Minor in American Politics: Democracy and the Political Process**  
(Please refer to p. 121)

**Minor in East Asian Studies**  
(Please refer to p. 133)

**Minor in International and Military Affairs**  
(Please refer to p. 141)

**Minor in International Criminal Justice**  
(Please refer to p. 143)

**Minor in Law and Legal Studies**  
(Please refer to p. 146)

**Minor in Non-Western Studies**  
(Please refer to p. 151)

### Political Science Course Descriptions

PSCI 101 *Introduction to Political Science* Three Credit Hours  
Required of political science freshmen.

An introduction of politics in general and the discipline of political science in particular. Attention will be given to the basic questions and methods of political science with introductions to the subfields of the discipline.

PSCI 102 *American National Government* Three Credit Hours  
Required of political science freshmen. Satisfies Social Science Core Requirement for non political science majors.

A study of the American constitution background, the rights and liberties of persons, public opinion, voting behavior, political parties, interest groups, and the organization and roles of the presidency, the Congress, and the national judiciary in policy formation and implementation.

PSCI 231 *International Politics* Three Credit Hours  
Required of political science sophomores.

An analysis of the international system, of the nation-state, the role of power in international politics, and the goals and instruments of a nation's foreign policy.

PSCI 232 *Comparative Politics* Three Credit Hours  
Required of political science sophomores.

An analysis of the various political systems in terms of institutions, structure, and function. Emphasis on the development of common criteria for the evaluation and comparison of these divergent systems.

PSCI 301 *American Parties and Politics* Three Credit Hours

An analysis of the dynamics of American politics, with particular emphasis upon the factors entering into the formulation of public opinion, the role of interest groups, and the nature and operation of the party system.

PSCI 302 *Urban Politics* Three Credit Hours

A study of mass participation in urban political affairs, political parties on local level, the municipal reform movement, and the alternative approaches to the study of local political systems. Emphasis placed on the problems of local government in metropolitan areas.

PSCI 303 *State and Local Government* Three Credit Hours

A study of the role of the states in the American constitutional system, the institutional organization of state governments, and the relationships both between the states and the national government and among the various levels of state government.

PSCI 304 *American Political Thought* Three Credit Hours

A study of the basic political ideas which have developed in response to American constitutional, social, and economic conditions.

PSCI 305 *American Presidency* Three Credit Hours

A study of the modern presidency with attention to its origin and its historical and constitutional development. Emphasis placed on the examination of the various roles and functions of the president and on an analysis of presidents in action.

PSCI 306 *Legislative Process* Three Credit Hours

A study of the organizations and procedures of a legislative body with attention to its role in policy formation and its relationships with other parts as a political and governmental system.

PSCI 307 *Southern Politics* Three Credit Hours

A study of politics in the South in both regional and national contexts. Attention given to the politics of individual states and to an analysis of regional developments in such areas as race relations, political behavior, and party competition.

PSCI 308 *Public Opinion and Political Behavior* Three Credit Hours

A systematic analysis of political attitudes and behavior in relation to techniques of opinion survey design and analysis, voting behavior, and mechanisms for influencing options.

PSCI 310 *Domestic Terrorism* Three Credit Hours

A survey of the domestic terrorism landscape in the United States by examining groups involving local nationals that use or attempt to use extreme violence against purely domestic targets. The course explores how nationalistic, religio-political, ideological, and single-issue terrorist groups attempt to influence or coerce others into action they would not otherwise take. The course also examines the threat posed by “home-grown” Jihadist terrorism in the U.S. with varying degrees of ideological, political, and material support from non-domestic al-Qaida affiliates and, additionally, the public policy issues related to the capacity of national security agencies to deter political violence by local nationals and home-grown Jihadists.

PSCI 311 *The Civil Rights Movement and American Politics* Three Credit Hours

Examination of the Civil Rights Movement from World War II to the present with special attention to the period from 1954 through 1965. The course will consider the impact of this critical period on American politics and political behavior during the decades since, down to the present. Key events, organizations, and personalities will be examined, and continuing issues such as affirmative action and racial typing will be discussed.

PSCI 331 *International Law* Three Credit Hours

A survey of international law as developed through treaties, customs, usages, and decisions of national and international tribunals.

PSCI 332 *National Security Policy* Three Credit Hours

An examination of the components of United States security policy. Consideration given to factors, both internal and external, affecting national security.

PSCI 333 *International Organization* Three Credit Hours

A survey of the development and functions of international organizations, including the League of Nations, the United Nations, and other international agencies seeking to promote harmony and cooperation among nations.

PSCI 335 *Comparative Foreign and Defense Policies* Three Credit Hours

A comparison and analysis of the foreign and defense policies of Russia, China, Britain, France, and selected Third World states, including an introduction to the defense strategies of the state and the relationship between foreign and defense policy in today's world.

PSCI 336 *Russia and the Commonwealth of Independent States* Three Credit Hours

A selective survey of the structure and operations of the government of Russia and the Commonwealth of Independent States.

PSCI 337 *East Asian Affairs* Three Credit Hours

A survey of China from 1911 to the present, with emphasis on the rise of communism in China, on the structure and operation of the Chinese People's Republic, and on contemporary Chinese foreign policy. As appropriate, Japan, the Koreans, and Taiwan will also be addressed.

PSCI 338 *Southeast Asian Affairs* Three Credit Hours

A study of the development of selected countries in the area with emphasis on the problems of regionalization, transition, ideological orientations, and the importance of the area to the national interests and foreign policy of the United States.

PSCI 339 *Middle Eastern Affairs* Three Credit Hours

A survey of the Middle East with emphasis on the domestic and foreign policies of the region's states and the role of the area in the foreign policy of the United States.

PSCI 340 *Latin American Affairs* Three Credit Hours

A study of Latin America with emphasis on issues of political change, development, and regionalism and on the importance of the area to the foreign policy of the United States.

PSCI 341 *African Affairs* Three Credit Hours

An analysis of the politics and modernization of Sub-Saharan Africa with emphasis on the diverse political, social, and economic factors influencing political development.

PSCI 342 *International Terrorism* Three Credit Hours

A study of international and transnational political violence, with some attention to the phenomenon of “state terrorism” (international repression) and its potential impact on the conduct of American foreign policy. Issues addressed include conceptualizing and defining terrorism, the structure of violent politics, the lessons and patterns from the history of contemporary political violence, State support for terrorism, and counterterrorism as a public policy problem.

PSCI 343 *Introduction to Non-Western Studies* Three Credit Hours

The core course for the non-Western studies minor, this course is a multidisciplinary introduction to the history and politics of the societies of Asia, Africa, and Latin America. Attention is addressed to their experiences with colonialism and confrontations with modernization as well as to their current international relations.

PSCI 344 *European Affairs* Three Credit Hours

An examination of politics and economics in selected states in the unified entity known as "Europe." Organizations such as the European Union and the North Atlantic Treaty Organization (and others) and their impact on the United States will also be addressed.

PSCI 345 *South Asian Affairs* Three Credit Hours

A study of key countries in the region: India, Pakistan, Nepal, Afghanistan, and Sri Lanka, with an emphasis on issues of development and security concerns such as nuclear weapons development, territorial disputes, communal conflicts, and other forms of political violence. Attention is also paid to the great power aspirations of India and Pakistan and their relations with the United States.

PSCI 346 *Multinational Peacekeeping* Three Credit Hours

An introduction to the issues relating to the mandating, deployment, and maintenance of multinational peacekeeping operations of the United Nations and selected regional/subregional organizations such as NATO, the OAU, ECOWAS, and Arab League. Includes an examination of the lessons learned from selected case study operations.

PSCI 348 *Theories of Peace and War* Three Credit Hours

An introduction to political and economic theories that explain the outbreak of war as well as the restoration of peace in the international system. Includes an application of theory in the context of the examination of selected case studies.

PSCI 351 *International Political Economy* Three Credit Hours

This course examines the relationship between economic and political behavior in the international sphere by first examining the three major theoretical perspectives of mercantilism, liberalism, and Marxism. Then it provides an overview of the major components of the modern world economy: multilateral trade, domestic trade policy, international finance and monetary policy, and exchange rates. Finally, the course investigates current issues in the field of international political economy, such as the North-South gap, the role of multinational corporations, and the effects of globalization on employment, migration, and the environment.

PSCI 352 *Global Democracy* Three Credit Hours

This course explores the question of democratic governance from theoretical and practical perspectives in order to understand what is meant by "measuring democracy"; reasons behind the historical spread of democracy and the numerous challenges-domestic and international; and obstacles to its spread and consolidation. The course incorporates a number of regional and country-specific experiences/case studies related to the democratization process.

PSCI 353 *International Economic and Development Institutions* Three Credit Hours

Prerequisite: PSCI 351 or permission of the instructor.

This course is an examination of competing theoretical perspectives and approaches to the study of international cooperation and international institutions, their form, membership, and governance structures. Students will gain a working knowledge of the major international economic institutions-in particular the International Monetary Fund, the World Bank Group, and the World Trade Organization as well as regional development banks-including how these institutions operate, their memberships, how they structure their decision making, and the political constraints they face.

PSCI 361 *Law and Legal Process* Three Credit Hours

This course serves as a general introduction to law, lawyers, judges, and the civil legal process. Through lectures, assigned reading, and class seminars, the course will broadly survey the American legal process, including the nature of law, judicial organization and the instruments of judicial power, civil proceedings and civil law, the work and training of lawyers, the recruitment of judges, and the nature of judicial decision-making. (Note: The criminal justice system is surveyed in CRMJ 201, Introduction to Criminal Justice.)

PSCI 371 *Leadership in Politics* Three Credit Hours

An introduction to the study and practice of political leadership to include necessary concepts and tools for understanding the elements of causation, constraint, and consequences in relation to leadership responses to challenges both inside and outside political institutions. Students will be introduced to interdisciplinary, cross-cultural, and comparative studies in order to understand the dynamic interplay of moral and rational calculations in relation to political strategy and advantage in contemporary society.

PSCI 391 *Foundations of Political Theory* Three Credit Hours

Required of political science juniors.

Major theoretical writing from the ancient Greeks to the late medieval period; emphasis on a comparison of ideas and on the relationships between theories and contemporary problems.

PSCI 392 *Modern Political Theory* Three Credit Hours

Required of political science juniors.

Major theoretical writing from the early modern period to the present day; emphasis on a comparison of ideas and on the relationships between theories and contemporary problems.

PSCI 393 *Research Methods in Political Science* Three Credit Hours

May be used as a subfield elective.

An examination of methods in the scientific study of political phenomena with emphasis given to the systematic study of politics and contemporary research problems in political science, including research design, data collection, data analysis, and computer applications.

PSCI 396 *Politics and the Media* Three Credit Hours

An examination of theories of communication, of the relationships between the various types of media and the political world, of the impacts of media on political decision-making, and of political themes found in films, television, literature, and other media forms. Specific topics include the nature and impact of television journalism, the context and political themes of selected films and novels, and the political roles performed by electronic and other forms of media.

PSCI 401 *Political Issues and Public Policy* Three Credit Hours

An introduction to political analysis through consideration of important contemporary American political issues as they relate to public policy; attention given to specific issues as well as the policy process (formulation, implementation, and evaluation of policy).

PSCI 402 *Politics of Bureaucracy and Public Administration* Three Credit Hours

An introduction to theories of public administration and bureaucracy and consideration of the role of administration in the governmental process with emphasis on the principles of administrative control, personnel, and fiscal management. The challenges, constraints, and opportunities posed by bureaucracies are also reviewed.

PSCI 403 *Topics in American Government and Politics* Three Credit Hours

Prerequisite: PSCI 102 (American National Government) or permission of course instructor.

Selected special topics or problems in the general area of American government and politics; offered periodically as the special interests of faculty and students permit.

PSCI 431 *American Foreign Relations* Three Credit Hours

A study of American foreign policy with emphasis on the institutions and processes in the making of foreign policy and on important problems and developments in the postwar years.

PSCI 433 *Topics in International Politics* Three Credit Hours

Prerequisite: PSCI 231 (International Politics) or permission of course instructor.

Selected special topics or problems in the general areas of international politics and security affairs; offered periodically as the special interests of faculty and students permit.

PSCI 461 *Issues in Contemporary Constitutional Law* Three Credit Hours

A study of selected cases and issues in U.S. constitutional law relating to contemporary controversies in American law and politics. The specific issues and cases studied may vary from semester to semester.

PSCI 462 *Constitutional Law: Civil Rights and Liberties* Three Credit Hours

Required of political science seniors.

A study of the underlying and basic principles of the Constitution as reflected in the leading decisions of the United States Supreme Court with special attention directed to the Bill of Rights and the Thirteenth, Fourteenth, and Fifteenth Amendments.

PSCI 463 *Topics in Law and Legal Studies* Three Credit Hours

Prerequisite: PSCI 361 (Law and Legal Process) or permission of course instructor.

Selected special topics or problems in the general areas of public law and legal process; offered periodically as the special interests of faculty and students permit.

PSCI 492 *Topics in Political Philosophy and Theory* Three Credit Hours

Prerequisite: PSCI 392 (Modern Political Theory) or permission of the course instructor. Cannot be used as a subfield elective.

Selected special topics in the general area of political philosophy and theory; offered periodically as the interests of faculty and students permit.

PSCI 498 *Independent Study* Three Credit Hours

Prerequisite: As determined by instructor.

An independent research project resulting in a formal paper, this study must be approved by the department head in consultation with an appropriate member of the faculty who will supervise the project. Virtually any aspect of politics may be investigated. Especially recommended for those considering graduate or professional study.

PSCI 499 *Internship* Three Credit Hours

Prerequisite: Permission of director of internships.

Internships with government agencies and private sector entities are offered to combine academic training with professional experience.

### Anthropology Course Descriptions

ANTH 201 *General Anthropology* Three Credit Hours

Man's biological and cultural origins as studied by physical anthropologists, archaeologists, and linguists.

ANTH 202 *Cultural Anthropology* Three Credit Hours

Satisfies the Core Social Science Requirement.

A comparative study of culture; habitat, technology, and economy; kinship and political organization; life cycles in primitive societies.

ANTH 307 *Introduction to Archaeology* Three Credit Hours

An introduction to archaeology which looks at kinds of prehistoric data and the methods used to obtain and interpret it. Attention will center upon the lives of hunters, food producers, and early community settlements.

ANTH 433 *Special Topics in Anthropology* Three Credit Hours  
 Selected topics or problems in the general area of anthropology and related group cultural processes; offered periodically as the special interests of faculty and students permit.

## Department of Psychology

Department Head: Taylor

Professors: Hanchon, Lassiter, Lipovsky, Matthews, Nida, Politano, Saylor, Taylor

Associate Professors: Fernald, Sawyer

Assistant Professors: Macdonald, Parrish

The major in psychology is designed around a broad liberal education whereby the humanities and the sciences are integrated through an emphasis on the study of human behavior. Students in psychology develop an approach to learning based on empirical, objective methodology and statistical data analysis. These skills enhance critical thinking and permit theory construction and analysis. Students who graduate from this program are expected to have the knowledge base and the data analysis skills to support graduate study in any of the specialty areas of psychology. They also should be well prepared for employment in positions that require understanding and motivating others. Examples of such employment areas include positions in personnel work, social service and mental health agencies, law enforcement, sales, and business.

The major in psychology aligns with the *American Psychological Association Guidelines for the Undergraduate Psychology Major 3.0 (2013)*. The structure of the psychology major fits with the five main areas of focus advocated by the guidelines: 1) emphasis on the basic knowledge of concepts in the discipline in psychology; 2) emphasis on scientific methods and critical thinking; 3) emphasis on ethics, social responsibility, and diversity; 4) emphasis on effective communication skills; and 5) emphasis on professional development.

The major program in psychology, which leads to the Bachelor of Arts degree, consists of a minimum of 37 hours of course work in psychology, including PSYC 201, PSYC 202, PSYC 203, PSYC 303, PSYC 310, PSYC 405, and PSYC 410. Students also will choose two courses from both *Cluster A* and *Cluster B* classes. *Cluster A* consists of PSYC 302, PSYC 402, and PSYC 403. *Cluster B* consists of PSYC 304, PSYC 305, and PSYC 306. The total number of classes across both clusters will be four. Students will also select one additional elective class from either Cluster A or Cluster B; alternatively, a special topics class (PSYC 463) may be used to satisfy this particular elective requirement.

The department also offers elective courses to majors in other academic disciplines.

The Department of Psychology offers graduate degree programs leading to the Ed.S. degree in School Psychology and the M.A. in Psychology: Clinical Counseling.

The Department of Psychology also sponsors the Psychology Club, which is open to all students interested in the study of human behavior regardless of their major. The club seeks to stimulate and maintain interest in scholarship and service and to promote closer social and intellectual association among students.

Psi Chi, the national honor society in Psychology, has a Citadel chapter open to undergraduate majors or minors with a 3.000 average who rank in the top third of their class. Psi Chi activities promote scholarship and research that prepare students for graduate school or other future endeavors in psychology.

**Minor in Psychology  
(Please refer to p. 154)**

**Psychology Course Descriptions**

PSYC 201 *General Psychology* Three Credit Hours

This course meets the Social Science core requirement for non-psychology majors.

An introduction to the scientific study of behavior; emphasis upon experimental investigation of such fields as development, cognition, perception, motivation, learning, emotions, physiology, and personality.

PSYC 202 *Developmental Psychology* Three Credit Hours

A study of the development of the individual from prenatal to senescent stages, emphasizing growth in intelligence, motor behavior, perception, cognition, socialization, and emotion. Empirical findings and theoretical interpretations in the study of human behavior will be explored.

PSYC 203 *Psychological Statistics* Three Credit Hours

Prerequisite: PSYC 201

An introduction to descriptive and inferential statistics used in psychological experimentation. Particular emphasis is placed upon hypothesis testing by means of the t-test and randomized designs of the analysis of variance.

PSYC 302 *Behavioral Neuroscience* Four Credit Hours

Prerequisite: PSYC 203, PSYC 303 (Psychology majors only); PSYC 201 (non-majors). *Cluster A.*

This course explores the role of biological factors in human experience and behavior. Students will develop a fundamental understanding of the structure and functions of the nervous system. Students will learn about the biological underpinnings of various behaviors, including vision, emotions, sleep, biological rhythms, learning, memory, drug addiction, neurological and psychological disorders. Students also will engage in laboratory experiences to further enhance their learning about the brain and nervous system.

PSYC 303 *Experimental Psychology* Four Credit Hours

Prerequisite: PSYC 203

This course introduces students to the methods of scientific inquiry used by psychologists. Students will learn how to design studies and how to analyze data using computer programs. Emphasis will be placed on critical thinking and clear communications.

PSYC 304 *Abnormal Psychology* Three Credit Hours

Prerequisite: PSYC 203, PSYC 303 (Psychology majors only); PSYC 201 (non-majors). *Cluster B.*

A study of fundamental theory and research in the area of abnormal behavior. Emphasis is on symptoms, etiology, and treatment of psychopathology and behavior problems.

PSYC 305 *Social Psychology* Three Credit Hours

Prerequisite: PSYC 203, PSYC 303 (Psychology majors only); PSYC 201 (non-majors). *Cluster B.*

A study of the individual in relation to his social environment with special attention to group behavior, communication, conformity, leadership, aggression, and interpersonal attraction.

PSYC 306 *Theories of Personality* Three Credit Hours

Prerequisite: PSYC 203, PSYC 303 (Psychology majors only); PSYC 201 (non-majors). *Cluster B.*

A study of major contemporary theories of personality with special emphasis on the biological and psychological foundations and integrative aspects of personality.

PSYC 310 *Professional Development in Psychology* Three Credit Hours

Prerequisite: PSYC 201

A seminar course designed to prepare students for a variety of careers in psychology. Topics include: an examination of the variety of jobs available in psychology, how to apply to graduate school or for a job, writing a formal research paper, and interviewing techniques.

PSYC 371 *Psychology of Leadership* Three Credit Hours

This course examines leadership theory and contemporary trends in leadership, organizational behavior, and the management of human resources as they are related to the emergence and effectiveness of leaders.

PSYC 402 *Cognitive Psychology* Three Credit Hours

Prerequisite: PSYC 203, PSYC 303 (Psychology majors only); PSYC 201 (non-majors). *Cluster A.*

This course surveys the theoretical and empirical work in the area of cognitive psychology. Topics include sensation and perception, pattern recognition, atten-

tion, memory, problem solving, language, decision-making, and comprehension. Students will become familiar with models of cognition through discussion and experiential exercises.

PSYC 403 *Psychology of Learning* Three Credit Hours

Prerequisite: PSYC 203, PSYC 303. *Cluster A.*

A comprehensive and critical review of the experimental literature in the area of learning and motivation, including the major learning theories and the motivational determinants of behavior.

PSYC 404 *Industrial/Organizational Psychology* Three Credit Hours

Prerequisite: PSYC 201

Application of psychological principles to the world of work. Specific topics include concepts of work, job satisfaction, personnel selection, performance appraisal, human engineering, leadership, and organizational behavior.

PSYC 405 *History and Systems of Psychology* Three Credit Hours

Prerequisite: PSYC 203, PSYC 303

Historical survey of psychology, emphasizing contributions of major “schools” of psychology, theories, their place in science, and current theoretical trends.

PSYC 407 *Psychological Testing* Three Credit Hours

Prerequisite: PSYC 201

A survey of the theory and principles of psychological testing, demonstration and discussion of representative tests of intelligence, aptitude, achievement, interests, and personality.

PSYC 410 *Contemporary Issues in Psychology* Three Credit Hours

Required of all senior psychology majors; open to others with the permission of the instructor.

A study of selected critical issues in contemporary psychology, encompassing the various aspects of the discipline. Special emphasis will be given to integrating concepts, principles, and skills learned from earlier courses and related disciplines.

PSYC 418 *Experiential Leadership in Psychology I* Three Credit Hours

Prerequisite: Permission of professor or department head

Open to majors or non-majors; may potentially be applied toward the Minor in Leadership Studies.

PSYC 418 and PSYC 419 provide opportunities for individualized and mentored internship, research, and leadership experiences in psychology and related disciplines. Students may take one or both courses. If taking both, students may select different mentors or different options for the two courses but are

encouraged to attempt more than one type of experience and to demonstrate a developmental progression in the nature and extent of their leadership within and across courses.

PSYC 419 *Experiential Leadership in Psychology II* Three Credit Hours

Prerequisite: Permission of professor or department head

Open to Majors or non-majors; may potentially be applied toward the Minor in Leadership Studies

PSYC 418 and PSYC 419 provide opportunities for individualized and mentored internship, research, and leadership experiences in psychology and related disciplines. Students may take one or both courses. If taking both, students may select different mentors or different options for the two courses but are encouraged to attempt more than one type of experience and to demonstrate a developmental progression in the nature and extent of their leadership within and across courses.

PSYC 420 *Research Project* Three Credit Hours

Prerequisite: Permission of department head

An independent research project culminating in a formal paper. Strongly recommended for students planning graduate study. Approval for enrollment based on capability of applicant and the acceptance of a written proposal.

PSYC 463 *Special Topics in Psychology* One to Three Credit Hours

Prerequisites: PSYC 201 and permission of department head

This course is designed to focus on a current problem, technique, or theory in the field of psychology.

Required courses provide a solid foundation, preparing students for graduate education or entry level employment. The field of psychology is much more diverse than can be fully reflected in our required curriculum, yet limited resources make a full slate of elective courses in psychology impossible. Through special topics courses, the department can offer (on an occasional basis) exposure to the frontiers of the field while maintaining a focus on the mainstream of psychology through required courses.

# SWAIN FAMILY SCHOOL OF SCIENCE AND MATHEMATICS

**Col. Darin Zimmerman, Dean**

**Department of Biology  
Col. John Weinstein, Head**

**Department of Chemistry  
Col. Holly Bevsek, Head**

**Department of Health and Human Performance  
Lt. Col. Timothy Bott, Head**

**Department of Mathematics  
and  
Computer Science  
Col. Mei-Qin Chen, Head**

**Swain Department of Nursing  
Lt. Col. Amelia M. Joseph, Head**

**Department of Physics  
Col. Russell O. Hilleke, Head**

## Department of Biology

Department Head: Weinstein

Professors: Gramling, J. , Gustafson, Nolan, Weinstein, Zardus

Associate Professors: Donnell, , Johnson, Rocha, Zanin

Instructor: Gramling, A.

The Biology Department is structured to offer courses which give students a better understanding of themselves, their relationship with their environment, and the diversity of life. Enrichment courses with minimum prerequisites are offered in summer and evening programs for interested individuals.

### B.S. Biology Major

The B.S. in Biology degree is intended for those students who plan to enter graduate, medical, dental, veterinary, or other professional schools; military service; and technical positions in the broader field of biology. The major is designed to provide students with a broad background in modern biology that will prepare them for employment or further study. All students majoring in biology are required to take the Introduction to Biology I and II sequence (BIOL 130, 131, 140, 141), Cell Biology (BIOL 205), Evolution (BIOL 208), Genetics (BIOL 308), Ecology (BIOL 406), and Senior Seminar (BIOL 411). Students must take four additional biology electives. One must be chosen from each of the following course groupings:

#### **Cell and Molecular Biology Courses:**

BIOL 290 Microbiology  
BIOL 340 Pathophysiology  
BIOL 341 Pharmacology  
BIOL 401 Developmental Biology  
BIOL 402 Descriptive Histology  
BIOL 424 Molecular Genetics  
BIOL 427 Immunology

#### **Ecology and Field Biology Courses:**

BIOL 314 Vascular Flora of South Carolina  
BIOL 407 Conservation Ecology  
BIOL 408 Ornithology  
BIOL 409 Marine Biology  
BIOL 425 Tropical Rainforest and Reef Ecology  
BIOL 426 Freshwater Biology



**Organismal Biology Courses:**

BIOL 203	Introduction to Plant Biology
BIOL 301	Invertebrate Zoology
BIOL 302	Comparative Vertebrate Anatomy
BIOL 309	Animal Behavior
BIOL 410	Vertebrate Natural History
BIOL 419	Economic Botany
BIOL 421	Toxicology

**Physiological Biology Courses:**

BIOL 403	Mammalian Physiology
BIOL 414	Environmental Physiology

**Bachelor of Science in Biology/Secondary Teaching Specialization**

The Bachelor of Science in Biology/Secondary Teaching Specialization major is designed to provide students with a broad background in modern biology that will prepare them for certification to teach Biology and General Science at the secondary school level. All students choosing this major are required to take the Introduction to Biology I and II sequence (BIOL 130, 131, 140, 141), Cell Biology (BIOL 205), Evolution (BIOL 208), Genetics (BIOL 308), Methods and Applications of Science (BIOL 330), Ecology (BIOL 406), and Senior Seminar (BIOL 411). Students must take four additional biology electives chosen from the list below and all other indicated courses. Students in this program must make a formal application for admission to the School of Education for the Internship in Teaching as outlined on page 165.

**Biology Electives:** One course must be chosen from each of the three areas below.

**Animal Physiology Area**

BIOL 403	Mammalian Physiology
BIOL 414	Environmental Physiology

**Botany Area**

BIOL 204	Introduction to Plant Biology
BIOL 314	Vascular Flora of South Carolina

**Zoology Area**

BIOL 301	Invertebrate Zoology
BIOL 302	Comparative Vertebrate Anatomy
BIOL 408	Ornithology
BIOL 410	Vertebrate Natural History

**Allied Science and Mathematics Courses**

CHEM 151/161	General Chemistry I
CHEM 152/162	General Chemistry II
EART 201	Earth Science
MATH 106/107	Applied Calculus I and II
PHYS 203/253	College Physics I
PHYS 204/254	College Physics II
STAT 160	Statistical Methods

**Required Education Courses**

EDUC 101	Education in Modern Society
EDUC 202	Educational Psychology
EDUC 206	Adolescent Development
EDUC 306	Teaching Reading in the Middle and High School
EDUC 312	Learners with Exceptionalities
EDUC 401	Methods and Materials of Middle and High School Teaching
EDUC 402	Special Methods in Teaching
EDUC 499	Internship in Teaching (Spring Semester Senior Year)

**Core Curriculum Courses**

Orientation	ORTN 101
Mathematics	Counted above
English	ENGL 101/102/201/elective
History	HIST 103/104 or 105/106
Science	Counted above
Social Science	ANTH 202, PSCI 102, PSYC 201, or SOCI 201
HESS	Two Activity Courses
HESS	RPED 250/251

**ROTC Courses**

AERO, MLTY, or NAVL sequence (101, 102, 201, 202, 301, 302, 401 and 402)

**Premedical-Pre dental Program**

Students who are planning to enter medical school, dental school, veterinary school, or professional school in allied health should consider the B.S. Biology major. The flexibility of the major course of study permits the preprofessional students to tailor their plans of study to each area of specialty. The department coordinates a voluntary program where students may gain practical experience before graduation. The large number of electives available in the biology curriculum makes it possible for the student to develop the broad science-humanities background necessary in the medical or dental profession.

### Research Opportunities

The Biology Department strongly urges majors to engage in research under the direction of a Citadel faculty member. The best way to learn science is to become actively involved in doing science and the Biology Department faculty offer majors many opportunities to become involved in their research programs. Majors can earn academic credit for research by enrolling in BIOL 320. This course can be used once as a biology elective and may be repeated one time as a general elective.

#### Minor in Biology (Please refer to p. 124)

#### Minor in Molecular Biology and Biochemistry (Please refer to p. 150)

#### Minor in Sustainability and Environmental Studies (Please refer to p. 159)

### Biology Course Descriptions

- BIOL 101 *General Biology I* Three Credit Hours  
Corequisite: BIOL 111  
An introductory course in biology designed for non-majors that emphasizes the importance of biology and its impact on human society. Topics include the methods of science, cell structure and function, photosynthesis and cellular respiration, molecular biology, and genetics.  
Lecture: three hours.
- BIOL 102 *General Biology II* Three Credit Hours  
Corequisite: BIOL 112  
A continuation of the introductory course for non-majors that covers topics including evolution, the diversity of life, plant and animal form and function, and principles of ecology. It is recommended that students complete BIOL 101 and 111 before taking BIOL 102 and 112.  
Lecture: three hours.
- BIOL 111 *General Biology I Laboratory* One Credit Hour  
Corequisite: BIOL 101  
Laboratory exercises designed to parallel and support the lecture content of BIOL 101.  
Laboratory: two hours.
- BIOL 112 *General Biology II Laboratory* One Credit Hour  
Corequisite: BIOL 102  
Laboratory exercises designed to parallel and support the lecture content of BIOL 102.  
Laboratory: Two hours.

- BIOL 130 *Introduction to Biology I* Three Credit Hours  
Corequisite: BIOL 131  
An introductory course required of all biology majors and education majors whose teaching field is biology; recommended for students in other majors who are interested in medicine or other health professions. Topics include the scientific method and data analysis, cell and molecular biology, and genetics.  
Lecture: three hours.
- BIOL 131 *Introduction to Biology I Laboratory* One Credit Hour  
Corequisite: BIOL 130  
Laboratory exercises designed to parallel the lecture content of BIOL 130.  
Laboratory: three hours.
- BIOL 140 *Introduction to Biology II* Three Credit Hours  
Prerequisite: BIOL 130 and 131 or a grade of "B" or better in BIOL 101 and 111  
Corequisite: BIOL 141  
A continuation of the introductory course for biology majors. Topics include evolution, the diversity of life, plant and animal biology, and ecology.  
Lecture: three hours.
- BIOL 141 *Introduction to Biology II Laboratory* One Credit Hour  
Prerequisite: BIOL 130 and BIOL 131  
Corequisite: BIOL 140  
Laboratory exercises designed to parallel the lecture content of BIOL 140.  
Laboratory: three hours
- BIOL 150 *General Biology for Engineers* Three Credit Hours  
Corequisite: BIOL 151  
An introductory course in biology designed for engineering students. Topics include the methods of science, chemistry and cells, evolution, ecology, and microbiology.  
Lecture: three hours.
- BIOL 151 *General Biology for Engineers Laboratory* One Credit Hour  
Corequisite: BIOL 150  
Laboratory exercises designed to parallel and support the lecture content of BIOL 150.  
Laboratory: two hours.

BIOL 203 *Introduction to Plant Biology* Four Credit Hours

Prerequisite: BIOL 102/112 or 140/141

A general survey of the vascular and nonvascular plants. Lecture and laboratory experiences will include a study of the characteristics, life cycles, evolutionary trends, ecological importance, and economic value of each plant group.

Lecture: three hours; laboratory: three hours.

BIOL 205 *Cell Biology* Four Credit Hours

Prerequisite: BIOL 140/141

Required of all biology majors.

An introduction to the morphological, biochemical and biophysical properties of cells and their significance in life processes.

Lecture: three hours; laboratory: three hours.

BIOL 206 *Human Genetics* Three Credit Hours

Prerequisite: BIOL 101

Does not count toward the biology major

This course will introduce students to a variety of genetic issues that they will encounter during their lives including: 1) the genetic basis of disease; 2) genetically modified organisms; 3) genetic screening and prenatal diagnosis; 4) cancer; 5) the human genome; 6) genetically modified organisms; and 7) DNA fingerprinting. In addition to gaining a scientific understanding of these issues, the ethical and societal impacts will be discussed.

Lecture: three hours.

BIOL 207 *Bioterrorism* Three Credit Hours

Prerequisite: BIOL 101

Does not count toward the biology major

This course will focus on specific organisms that could be used as bio-weapons, discussing their normal existence, common methods of weaponization of such organisms, their potential effects on a human population, and strategies for protecting populations from bioterrorism attacks (vaccine development). A detailed study of the biological characteristics of these organisms will be the main focus study for this course.

Lecture: three hours.

BIOL 208 *Evolution* Three Credit Hours

Prerequisite: BIOL 140/141

Required of all biology majors

A basic course in the concepts of evolution and population dynamics. The history of evolutionary thought, the processes of organic evolution, and systematics are included.

Lecture: three hours.

BIOL 209 *Environmental Science* Three Credit Hours

Does not count toward biology major.

Human impact on our environment has never been so intensive or so far-reaching. Fundamental conditions in global nutrient cycling, biological diversity, atmospheric composition, and climate are changing at an unprecedented rate. This course will use real world case studies to investigate the complex interactions among ecology, geology, chemistry, ethics, policy, and economics.

Lecture: three hours.

BIOL 217 *Human Anatomy and Physiology I* Three Credit Hours

Prerequisite: BIOL 101/111 or BIOL 130/131 and EXSC major or Permission of Biology Department Head.

Does not count toward biology major.

An introduction to the integrated structure and function of human organ systems covering cells and tissue; integumentary, skeletal, and nervous systems; and sensory organs.

Lecture: three hours; laboratory: BIOL 227 is optional.

BIOL 218 *Human Anatomy and Physiology II* Three Credit Hours

Prerequisite: BIOL 217

Does not count toward biology major.

A continuation of the study of integrated structure and function of the human organ systems covering muscular, cardiovascular, lymphatic, respiratory, digestive, urinary, endocrine, and reproductive systems.

Lecture: three hours; laboratory, BIOL 228 is optional.

BIOL 227 *Human Anatomy and Physiology I Lab* One Credit Hour

Prerequisite: BIOL 101/111

Corequisites or prerequisites: BIOL 217

Does not count toward biology major.

Laboratory exercises designed to illustrate and support lecture content of BIOL 217.

Laboratory: two hours.

BIOL 228 *Human Anatomy and Physiology II Lab* One Credit Hour

Prerequisite: BIOL 217

Corequisites or prerequisites: BIOL 218

Does not count toward biology major.

Laboratory exercises designed to illustrate and support lecture content of BIOL 218.

Laboratory: two hours.

- BIOL 290 *Microbiology* Four Credit Hours  
 Prerequisite: BIOL 205 or approval of instructor.  
 A general study of microorganisms and their importance to humans with special emphasis on their fundamental life processes. Includes a brief introduction to epidemiology and immunology.  
 Lecture: three hours; laboratory: three hours.
- BIOL 291 *History of Biology* Three Credit Hours  
 Prerequisite: BIOL 140/141 or permission of the instructor.  
 This course covers major aspects of the development of biological sciences and their relationship to other scientific disciplines. Special attention will be paid to the development and content of theories and to changes in the methods of biological research.  
 Lecture: three hours.
- BIOL 301 *Invertebrate Zoology* Four Credit Hours  
 Prerequisite: BIOL 140/141  
 A general study of the invertebrate animals, including taxonomy, morphology, and ecology.  
 Lecture: three hours; laboratory: three hours.
- BIOL 302 *Comparative Vertebrate Anatomy* Four Credit Hours  
 Prerequisite: BIOL 140/141  
 A study of the functional anatomy of representative vertebrate animals. Emphasis will be placed on the evolution of the vertebrate body and adaptations in form and function in response to environmental pressures.  
 Lecture: three hours; laboratory: three hours.
- BIOL 308 *Genetics* Four Credit Hours  
 Prerequisite: BIOL 140/141 or permission of the instructor; STAT 160 strongly recommended.  
 Required of all biology majors.  
 A study of inheritance, including Mendelian genetics, molecular genetics, changes in chromosome structure and number, cytogenetics, and population genetics.  
 Lecture: three hours; laboratory: three hours.
- BIOL 309 *Animal Behavior (Ethology)* Four Credit Hours  
 Prerequisite: BIOL 140/141 or PSYC 201  
 This course deals with the description, development, and adaptive nature of behavior in free-living animals. The laboratory will emphasize the description and quantification of behavior patterns. It is highly recommended that students take STAT 160 before enrolling in this course.  
 Lecture: three hours; laboratory: three hours.

- BIOL 314 *The Vascular Flora of South Carolina* Four Credit Hours  
 Prerequisite: BIOL 102/112 or BIOL 209 or BIOL 140/141  
 An introductory study of the native vascular flora of South Carolina, emphasizing the identification and collection of native plants. The student will have practice in use of taxonomic keys and in preparation of specimens.  
 Lecture: two hours; laboratory: four hours.
- BIOL 320 *Intern Research* Three Credit Hours  
 Prerequisite: Permission of the department head and supervising instructor.  
 Students will have the opportunity to participate in ongoing research projects with faculty at The Medical University of South Carolina, National Marine Fisheries Services, and The South Carolina Department of Natural Resources, etc. Students must plan their schedule to allow two free afternoons per week, totaling eight hours per week in the laboratory or field, excluding travel. They are expected to maintain a weekly laboratory notebook and write a research paper detailing their work.  
 Eight hours per week.
- BIOL 321 *Undergraduate Research in Biology I* Three Credit Hours  
 Prerequisite: Permission of the department head and supervising instructor.  
 Students will have the opportunity to participate in ongoing research projects with faculty at The Citadel. Students must plan their schedule to allow two free afternoons per week, totaling eight hours per week in the laboratory or field, excluding travel. They are expected to maintain a weekly laboratory notebook and write a research paper detailing their work. This class may be taken for Biology elective credit with permission of the department head.  
 Eight hours per week.
- BIOL 322 *Undergraduate Research in Biology II* Three Credit Hours  
 Prerequisite: Permission of the department head and supervising instructor, and completion of BIOL 321.  
 Students will have the opportunity to participate in ongoing research projects with faculty at The Citadel. Students must plan their schedule to allow two free afternoons per week, totaling eight hours per week in the laboratory or field, excluding travel. They are expected to maintain a weekly laboratory notebook and write a research paper detailing their work. This class may be taken for Biology elective credit with permission of the department head.  
 Eight hours per week.
- BIOL 323 *Undergraduate Research in Biology III* Three Credit Hours  
 Prerequisite: Permission of the department head and supervising instructor, and completion of BIOL 322.  
 Students will have the opportunity to participate in ongoing research projects

with faculty at The Citadel. Students must plan their schedule to allow two free afternoons per week, totaling eight hours per week in the laboratory or field, excluding travel. They are expected to maintain a weekly laboratory notebook and write a research paper detailing their work. This class may be taken for Biology elective credit with permission of the department head.

Eight hours per week.

BIOL 324 *Undergraduate Research in Biology IV* Three Credit Hours

Prerequisite: Permission of the department head and supervising instructor, and completion of BIOL 323.

Students will have the opportunity to participate in ongoing research projects with faculty at The Citadel. Students must plan their schedule to allow two free afternoons per week, totaling eight hours per week in the laboratory or field, excluding travel. They are expected to maintain a weekly laboratory notebook and write a research paper detailing their work. This class may be taken for Biology elective credit with permission of the department head.

Eight hours per week.

BIOL 330 *Methods and Applications in Science* Three Credit Hours

Prerequisites: BIOL 140/141 and CHEM 152/162

A practical experience in the design and implementation of laboratory and field exercises appropriate for secondary level science classes. Applications of science and the scientific method in society are emphasized. Safety in the laboratory and on field experiences as well as science fair preparation is included.

Also listed as CHEM 330.

Lecture: two hours; laboratory: three hours.

BIOL 340 *Pathophysiology* Three Credit Hours

Prerequisites: BIOL 130 and BIOL 131

This course will provide students with a broad overview of human diseases and disorders. Common disease and disorder mechanisms will be discussed first. These general concepts will be further investigated later in the course through the study of common pathologies of various organ systems. Case studies will be employed throughout the course to provide students with real-world application of concepts learned.

Lecture: three hours.

BIOL 341 *Pharmacology* Three Credit Hours

Prerequisites: BIOL 130 and BIOL 131, CHEM 103 and CHEM 113 and CHEM 104 and CHEM 114 or CHEM 151 and CHEM 161 and CHEM 152 and CHEM 162

The purpose of this course is to introduce students to the applications of pharmacology and the concept of pharmacotherapeutics. At the completion of the course, students will have an understanding of the major pharmacotherapeutic agents as they relate to the nursing process and diseases/disorders.

Lecture: three hours.

BIOL 401 *Developmental Biology* Four Credit Hours

Prerequisites or corequisites: BIOL 205 and BIOL 308

A study of animal embryology and its molecular control, including: the process of fertilization; the processes of cleavage, gastrulation, and neurulation; the formation of tissues and organs from the three primordial germ layers; the role of secondary induction and of hormones in development; the role of the environment in development; and some of the techniques of molecular biology that are used in the study of developmental processes. The laboratory will include use of model systems to investigate the principles discussed in lecture.

Lecture: three hours; laboratory: three hours.

BIOL 402 *Descriptive Histology* Four Credit Hours

Prerequisite: BIOL 140/141

A detailed study of the chief types of animal tissues and a description of the histology of organs. Laboratory work includes microscopic study of cells, tissues, and organs of animals.

Lecture: three hours; laboratory: three hours.

BIOL 403 *Mammalian Physiology* Four Credit Hours

Prerequisites: BIOL 140/141 and CHEM 208

A systematic study of the general physiology of mammalian organ systems.

Lecture: three hours; laboratory: three hours.

BIOL 406 *Ecology* Four Credit Hours

Prerequisite: BIOL 140/141

Required of all biology majors.

An introduction to the study of biological interrelationships and the effects of the environment on the structure and function of animal and plant populations. Laboratory will emphasize methods and materials of ecological investigations. It is highly recommended that students take Statistics before enrolling in this course.

Lecture: three hours; laboratory: four hours.

BIOL 407 *Conservation Ecology* Three Credit Hours

Prerequisite: BIOL 102/112 or BIOL 209 or BIOL 140/141

Conservation ecology is an integrated science based primarily on ecology, with important contributions from genetics, evolution, biogeography, sociology, economics, and political science. The course will address definitions, origins, and patterns of biological diversity, explore why the maintenance of biodiversity in native and human dominated ecosystems is fundamentally important to the continued well-being of humans and other species, and examine the context and causes of extinction and strategies for preventing or ameliorating the loss of biodiversity.

Lecture: three hours

BIOL 408 *Ornithology* Four Credit Hours

Prerequisite: BIOL 102/112 or BIOL 209 or BIOL 140/141

A study of the structure, function, and ecology of birds. Field trips and bird specimens will give students a working knowledge of birds common to South Carolina.

Lecture: three hours; laboratory: three hours.

BIOL 409 *Marine Biology* Four Credit Hours

Prerequisite: BIOL 140/141

The lectures cover major ecological factors and the fundamentals of oceanography. Laboratory work stresses familiarities with species, taxonomic methods, sampling procedures, experimental design, use of equipment, and data handling.

Lecture: three hours; laboratory: three hours.

BIOL 410 *Vertebrate Natural History* Four Credit Hours

Prerequisite: BIOL 140/141

An introduction to the classification, ecology, evolution and distribution of the vertebrates. Laboratory with emphasis on identification and field study techniques, especially with respect to the vertebrates of South Carolina.

Lecture: three hours; laboratory: three hours.

BIOL 411 *Senior Seminar* One Credit Hour

Required of all biology majors. Open only to seniors.

A group study of current topics of biological interest.

Lecture: one hour.

BIOL 412 *Special Topics in Biology* Four Credit Hours

Prerequisite: permission of the instructor.

A course designed for the study of specialized topics in modern biology.

Lecture: variable; laboratory: variable

BIOL 414 *Environmental Physiology* Four Credit Hours

Prerequisite: BIOL 205

This course will cover the physiological adaptations of organisms to physical and chemical parameters of the environment. It includes molecular mechanisms which help organisms adapt to environmental factors.

Lecture: three hours; laboratory: three hours.

BIOL 419 *Economic Botany* Three Credit Hours

Prerequisite: BIOL 102/112 or BIOL 209 or BIOL 140/141

An introductory course in economic botany devoted to the consideration of plants which are useful or harmful to humans; their origins and history, botanical relationships, chemical constituents which make them economically important, and their roles in prehistoric and modern cultures and civilizations.

Lecture: three hours.

BIOL 421 *Toxicology* Four Credit Hours

Prerequisites: BIOL 102 or 140 and CHEM 104 or 152, or BIOL 218

An overview of the basic science of poisons, including the disposition of chemicals in the body, the role of metabolism in enhancing or reducing their toxicity, mechanisms of toxicity, and the effects of toxicants on major organ systems.

Lecture: three hours; laboratory: three hours.

BIOL 424 *Molecular Genetics* Four Credit Hours

Prerequisites: BIOL 308, CHEM 208; CHEM 409 Strongly Suggested; BIOL 290 suggested.

Coordinated lecture/laboratory class covering classical molecular and cellular biochemistry as well as modern molecular genetics. Study of the manner in which genetic information is carried in DNA and how DNA directs the synthesis of proteins in bacterial and eukaryotic cells and their associated viruses. Specific topics to be covered include mechanisms governing gene expression, metabolic control system, gene therapy, oncogenesis, molecular genetics of genetic diversity, molecular basis of human diseases, and a review of known disease-causing genes such as the cystic fibrosis gene, Huntington's chorea gene, and the Duchenne Muscular Dystrophy gene.

Lecture: three hours; laboratory: three hours.

BIOL 425 *Tropical Rainforest and Reef Ecology* Four Credit Hours

The objectives of this experiential course are to survey biodiversity and provide understanding of ecological principles in tropical habitats through physical involvement with the environment. Two co-instructors will lead students on a 10-12 day excursion in forest and reef habitats of the Neotropics, providing natural history instruction and interpretation. Participants will have the opportunity to immerse themselves in the subject by walking forest paths, swimming forest streams, spe-

lunking caves, paddling mangrove swamps, combing beaches, and snorkeling coral reefs. A species list of plants and animals will be assembled for each habitat and readings from the scientific literature, appropriate to the region, will be assigned for analysis and discussion.

BIOL 426 *Freshwater Biology* Four Credit Hours  
Prerequisite: BIOL 140/141

The study of freshwater organisms and their environment. Instruction will cover the biological diversity, ecological and physiological adaptations, and the physical setting of freshwater systems. Local systems of interest include large coastal rivers and lakes, upper portions of estuaries and old rice fields.

BIOL 427 *Immunology* Three Credit Hours  
Prerequisites or corequisites: BIOL 205 and BIOL 308

A description of the immune system including the cells and organs involved in immunity; antigen-antibody reactions; immunoglobulin structure, function; organization and expression of immunoglobulin genes; the major histocompatibility complex; immune regulation and tolerance. These basic concepts will be applied to understanding the role of the immune system in vaccinations; infectious disease; organ transplantation; autoimmune disease; immunodeficiency diseases; AIDS and cancer.

Lecture: three hours.

BIOL 429 *Literature Seminar* One Credit Hour  
Prerequisite: BIOL 140/141

A current topics course that involves discussions of relevant journal articles and related materials.

## Department of Chemistry

Department Head: Bevsek

Professors: Mabrouk, Zuraw

Associate Professors: Adair, Bevsek, McAfee

Assistant Professors: Dorko, Hunter

Visiting Assistant Professor: Knight

The course of study for students majoring in chemistry is designed to prepare them to enroll as graduate students in full standing at leading universities; to provide the foundation for pursuing careers in medicine, dentistry, and other professions; to teach chemistry in public and private secondary schools; and to fill positions as chemists in industrial laboratories. The curricula embody training in the five fundamental subdivisions of the science: biochemistry, inorganic, organic, analytical, and physical chemistry.

The department occupies Byrd Hall, which was completed in 1968. Within its 52,000 square feet, this facility houses a lecture theater, laboratories, computer laboratory, and conveniently located stock, preparation, and balance rooms.

### **B.S. in Chemistry**

The B.S. in Chemistry degree is intended for those students who plan to enter graduate, medical, dental, veterinary, or other professional schools; military service; and positions in industry. A specific curriculum will be developed in consultation with the student's academic advisor to fit each student's specific career goals. Requirements of the degree are:

CHEM 153/163 General Chemistry for Majors I/General Chemistry Laboratory for Majors I

CHEM 154/164 General Chemistry for Majors II/General Chemistry Laboratory for Majors II

CHEM 207/217 Organic Chemistry I/Organic Chemistry Laboratory I

CHEM 208/218 Organic Chemistry II/Organic Chemistry Laboratory II

CHEM 300 Quantitative Analysis

CHEM 302 Instrumental Analysis

CHEM 305/315 Physical Chemistry I/Physical Chemistry Laboratory I

CHEM 306/316 Physical Chemistry II/Physical Chemistry Laboratory II

CHEM 308 Introduction to Chemical Research

CHEM 401 Inorganic Chemistry I

CHEM 409	Biochemistry I
CHEM 419	Senior Research I
CHEM 420	Senior Research II

B.S. in Chemistry majors must also take the following supporting courses:

MATH 131	Analytical Geometry and Calculus I
MATH 132	Analytical Geometry and Calculus II
PHYS 221/271	Physics with Calculus I/Laboratory for Physics with Calculus I
PHYS 222/272	Physics with Calculus II/Laboratory for Physics with Calculus II

Majors in the B.S. in Chemistry program must also take an approved elective from the following selection: BIOL 290, 308, 421, 424, 427; CHEM 402, 404, 410; CSCI 205; MATH 303, 335, 343, 344, 381, 403, 411, 422, 470; PHYS 301, 307, 308, 315, 320, 403, 405, 409, 410.

Majors in B.S. in Chemistry must also take another approved elective from the following selection: CHEM 402, 404, 410.

### **B.S. in Chemistry (American Chemical Society Accredited)**

Students who wish to pursue research-related careers (chemical, medical, industrial) should consider taking the courses to complete the American Chemical Society approved program. Students completing these additional requirements are awarded a certificate by the American Chemical Society documenting their status as professional chemists and are frequently given preferential treatment as candidates for professional positions. In order to qualify for this distinction, students must complete all the requirements of the B.S. in Chemistry program and these additional courses:

MATH 234	Applied Engineering Mathematics I
CHEM 460	Biochemistry Laboratory

A chapter of the Student Members of the American Chemical Society is active at The Citadel.

### **B.S. in Chemistry - Biochemistry Specialization**

Students who have a particular interest in biochemistry or those who intend to enter medical, dental, veterinary, or similar professional schools are encouraged to major in the B.S. in Chemistry - Biochemistry Specialization program. Requirements for this degree are the same as the requirements for the B.S. in Chemistry program with the following differences:

CHEM 315 is not required.  
CHEM 410 and CHEM 460 are required.

Two approved electives are not required; however, one approved biology elective must be chosen from the following: BIOL 290, 308, 421, 424, or 427.

Students in this program may also be awarded an ACS accredited degree by taking the following additional courses:

CHEM 315	Physical Chemistry Laboratory I
MATH 234	Applied Engineering Mathematics I

### **B.A. in Chemistry**

The curriculum for the B.A. in Chemistry provides great flexibility in choosing electives which permit the design of a program to fit the student's individual aspirations. This degree is intended for those students who wish to combine a technical background with a liberal arts education.

Requirements for the degree are:

CHEM 153/163	General Chemistry for Majors I/General Chemistry Laboratory for Majors I
CHEM 154/164	General Chemistry for Majors II/General Chemistry Laboratory for Majors II
CHEM 207/217	Organic Chemistry I/Organic Chemistry Laboratory I
CHEM 208/218	Organic Chemistry II/Organic Chemistry Laboratory II
CHEM 308	Introduction to Chemical Research
CHEM 419	Senior Research I
CHEM 420	Senior Research II

One sequence from one of the following areas:

Analytical Chemistry: CHEM 300, CHEM 302  
Physical Chemistry: CHEM 305/315, CHEM 306/316  
Biochemistry: CHEM 409, CHEM 410, CHEM 460

Students must also take one course from each of the remaining three chemical areas, e.g., if students take the full analytical chemistry sequence, then they must take one course from the physical chemistry, inorganic chemistry, and biochemistry sequences.

B.A. in Chemistry majors must also take the following supporting courses:

MATH 106	Applied Calculus I
MATH 107	Applied Calculus II
PHYS 203/253	College Physics I/Laboratory for College Physics I
PHYS 204/254	College Physics II/Laboratory for College Physics II



### **B.A. in Chemistry - Teaching Specialization in Chemistry and Comprehensive Broad Field Science**

The curriculum for the B.A. in Chemistry with Teaching Specialization in Chemistry and Comprehensive Broad Field Science provides a broad background in chemistry and the natural sciences to prepare students to teach at the secondary school level. In this program, the student must make a formal application for admission to the School of Education for the Internship in Teaching. Requirements for this degree are the same as the B.A. in Chemistry program requirements with the following differences:

CHEM 208/218 are not required.

CHEM 300 is required.

CHEM 330 Methods and Applications of Science is required.

CHEM 409 is required.

BIOL 130/131 or BIOL 101/111 are required.

BIOL 140/141 or BIOL 102/112 are required.

EART 201 Introduction to Earth Science is required.

PSYC 201 General Psychology is required.

The following education courses are required:

EDUC 101	Education in Modern Society
EDUC 202	Educational Psychology
EDUC 206	Adolescent Development
EDUC 301	Foundations in Reading
EDUC 306	Teaching Reading and Writing in the Middle and High School
EDUC 312	Learners with Exceptionalities
EDUC 401	Methods and Materials of Middle and High School Teaching
EDUC 402	Special Methods in Teaching
EDUC 499	Internship in Teaching

### **Premedical Program**

Students who plan to enter medical school or allied professional schools such as dental or veterinary school should consider either of the two B.S. in Chemistry programs. The non-ACS curriculum will provide a solid foundation for medical, dental or veterinary school. However, students who are pursuing a career in medical research should consider taking the ACS approved curriculum. Students who plan to enter medical school upon completion of their baccalaureate

degrees should acquaint themselves with requirements of the medical schools of their choice and plan their programs accordingly. An extremely worthwhile reference to the entrance requirements for all medical schools in the United States and Canada is *Medical School Admission Requirements*, published each year by the Association of American Medical Colleges, One DuPont Circle N.W., Washington, D.C. 20036.

### **Minor in Chemistry (Please refer to p. 126)**

### **Minor in Molecular Biology and Biochemistry (Please refer to p. 150)**

### **Requirements for Non-Science Students**

Unless the students' degree plans stipulate they take CHEM 151/161 and CHEM 152/162, it is highly recommended they take CHEM 103/113 and CHEM 104/114. A student may not use both CHEM 103 and CHEM 151 or CHEM 104 and CHEM 152 to meet degree requirements.

### **Chemistry Course Descriptions**

CHEM 103 *Introduction to Chemistry I* Three Credit Hours  
Corequisite or prerequisite: CHEM 113

For non-science majors only.

The first semester of a course designed for students who are not science and engineering majors. The course will cover the fundamentals of chemistry including electronic structure of the atoms, bonding, basic chemical calculations, gases, and various types of reactions. Mathematical emphasis will be less rigorous than in CHEM 151. Chemical processes of products used in everyday life will be stressed.

Lecture: three hours.

CHEM 104 *Introduction to Chemistry II* Three Credit Hours  
Prerequisites: CHEM 103 and CHEM 113 or CHEM 151 and CHEM 161  
Corequisite or prerequisite: CHEM 114

For non-science majors only.

The concluding semester of a course designed for students who are not science and engineering majors. Among the topics to be covered will be the relationship of chemistry to the environment, to the human body, to energy production, and to product manufacturing. Emphasis will be placed on making students more informed consumers as they choose and use everyday products.

Lecture: three hours.

CHEM 113 *Introduction to Chemistry I Laboratory* One Credit Hour

Prerequisite or corequisite: CHEM 103

Required of all students selecting CHEM 103.

Student-conducted laboratory procedures and experiments designed to parallel as closely as possible and to enhance the material covered in CHEM 103. Emphasis will be placed on basic laboratory techniques. Demonstrations will be used to illustrate important chemical concepts.

Laboratory: two hours.

CHEM 114 *Introduction to Chemistry II Laboratory* One Credit Hour

Prerequisites: CHEM 103 and CHEM 113

Corequisite or Prerequisite: CHEM 104

Required of all students selecting CHEM 104.

A continuation of CHEM 113. Experiments and demonstrations will parallel, as closely as possible, and enhance the material covered in CHEM 104. Preparation and analysis of some interesting common products will be conducted.

Laboratory: two hours.

CHEM 140 *General Chemistry for Engineers* Three Credit Hours

Prerequisite or corequisite: CHEM 141

Required of freshmen majoring in electrical or mechanical engineering.

This course is designed to introduce the engineering student to some of the fundamental concepts of chemistry. Topics to be covered include: stoichiometry, atomic structure, chemical bonding, properties and reactions of inorganic compounds, properties of gases, periodic trends, Lewis dot structures, molecular geometries, intermolecular forces, phase diagrams, solids, and polymers.

Lecture: three hours.

CHEM 141 *General Chemistry for Engineers Laboratory* One Credit Hour

Prerequisite or corequisite: CHEM 140

Required of all students selecting CHEM 140.

The first hour of this course will serve as a discussion section meant to reinforce chemical concepts being discussed in CHEM 140. The last two hours will be an introduction to laboratory techniques and experiments designed to accompany the topics covered in CHEM 140.

Lecture: one hour; laboratory: two hours.

CHEM 151 *General Chemistry I* Three Credit Hours

Corequisite or prerequisite: CHEM 161

Required of all freshmen majoring in the sciences and engineering; the chemistry option for B.S. in Mathematics or Computer Science; elective to others.

Problem-solving techniques and essential concepts, including structure and properties, reactions, stoichiometry, states of matter, thermochemistry, and bonding. Calculators with logarithmic capability are required.

Lecture: three hours.

CHEM 152 *General Chemistry II* Three Credit Hours

Prerequisites: CHEM 151 and CHEM 161

Corequisite or prerequisite: CHEM 162

Required of all students majoring in the sciences; the chemistry option for B.S. in Mathematics or Computer Science; elective to others.

Continuation of CHEM 151. Emphasis includes solutions, kinetics, equilibrium, acids and bases, solubility, redox, and an introduction to organic chemistry.

Lecture: three hours.

CHEM 153 *General Chemistry I for Chemistry Majors* Three Credit Hours

Prerequisite or corequisite: CHEM 163

Required of all freshmen majoring in chemistry. Chemistry majors must have a grade of C or higher.

Students will learn about stoichiometry, atomic structure, chemical bonding, properties and reactions of inorganic compounds, periodic trends, thermochemistry, properties of gases, Lewis dot structures, molecular geometries, and molecular orbital theory. Introduction to research methods and problem solving techniques will be incorporated throughout the semester.

Lecture: three hours.

CHEM 154 *General Chemistry II for Chemistry Majors* Three Credit Hours

Prerequisites: CHEM 153 and CHEM 163 or permission of department head.

Corequisite: CHEM 164

Required of all freshmen majoring in chemistry. Chemistry majors must have a grade of C or higher.

A continuation of CHEM 153 in which students continue to explore theory and application of chemical concepts including solubility and solutions, kinetics, equilibrium, acid/base chemistries, oxidation/reduction reactions, nuclear chemistry, and an introduction to organic chemistry. Introduction to research methods and problem solving techniques will continue to be discussed and practiced.

Lecture: three hours.

- CHEM 161 *General Chemistry I Laboratory* One Credit Hour  
Prerequisite or corequisite: CHEM 151  
Required of all students selecting CHEM 151.  
Introduction to laboratory techniques and experiments designed to accompany the topics covered in CHEM 151.  
Laboratory: two hours.
- CHEM 162 *General Chemistry II Laboratory* One Credit Hour  
Prerequisites: CHEM 151 and CHEM 161  
Corequisite or prerequisite: CHEM 152  
Required of all students selecting CHEM 152.  
A continuation of CHEM 161; experiments include an introduction to qualitative analysis, quantitative techniques, and selected instrumental methods.  
Laboratory: two hours.
- CHEM 163 *General Chemistry I Laboratory for Chemistry Majors* One Credit Hour  
Prerequisite or corequisite: CHEM 153  
The first hour of this course will serve as a discussion section meant to reinforce chemical concepts being discussed in CHEM 153. The last two hours will be an introduction to laboratory techniques and experiments designed to accompany the topics covered in CHEM 153.  
Lecture: one hour; laboratory: two hours.
- CHEM 164 *General Chemistry II Laboratory for Chemistry Majors* One Credit Hour  
Prerequisites: CHEM 151 and CHEM 161  
Corequisite or prerequisite: CHEM 152  
Required of all students majoring in chemistry.  
A continuation of CHEM 161; experiments include an introduction to qualitative analysis, quantitative techniques, and selected instrumental methods. Research skills are introduced and utilized in a project.  
Lecture: one hour; laboratory: two hours.
- CHEM 207 *Organic Chemistry I* Three Credit Hours  
Prerequisites: CHEM 152/162 or CHEM 154/164; Chemistry majors must have a grade of C or higher.  
Required of all sophomores majoring in chemistry.  
A study of the aliphatic hydrocarbons, their preparations and reactions, with emphasis on reaction mechanisms and transformations.  
Lecture: three hours.

- CHEM 208 *Organic Chemistry II* Three Credit Hours  
Prerequisites: CHEM 207 and CHEM 217  
Corequisite or prerequisite: CHEM 218  
A study of aromatic compounds and the various functional classes of compounds. Emphasis will be placed on reactions, reaction mechanisms, and transformations. Important biomolecules will be covered briefly.  
Lecture: three hours.
- CHEM 217 *Organic Chemistry I Laboratory* One Credit Hour  
Corequisite or prerequisite: CHEM 207  
A course which emphasizes the development of skill in the use of basic laboratory techniques through the completion of a series of experiments involving various types of reactions such as substitution, elimination, and addition reactions with an introduction to modern instrumentation such as the IR spectrometer, gas chromatograph, and NMR spectrometer.  
Laboratory: three hours.
- CHEM 218 *Organic Chemistry II Laboratory* One Credit Hour  
Prerequisites: CHEM 207 and CHEM 217  
Corequisite or prerequisite: CHEM 208  
A continuation of CHEM 217 with the emphasis on the synthesis, reactions, and identification of the various classes of organic compounds.  
Laboratory: three hours.
- CHEM 300 *Quantitative Analysis* Four Credit Hours  
Prerequisites: CHEM 152/162 or CHEM 154/164 and MATH 107 or the equivalent or permission of the instructor.  
Required of all juniors pursuing the B.S. in chemistry; elective to others.  
This course has as a primary focus the chemical principles involved with classical gravimetric and volumetric analysis; however, modern methods of analysis including colorimetry and potentiometry are introduced.  
Lecture and discussion: three hours; laboratory: three hours.
- CHEM 302 *Instrumental Methods* Four Credit Hours  
Prerequisites: CHEM 300 or permission of the instructor.  
Required of all juniors pursuing the B.S. in chemistry; elective to others.  
Modern instrumental methods of analysis are discussed, with emphasis on the physical or chemical principles involved in the method, design or analytical instruments, and treatment of analytical data. Laboratory work provides practice in the three major areas of instrument analysis—chromatography, electrochemistry, and spectroscopy.  
Lecture: two hours; laboratory: four hours.

CHEM 305 and *Physical Chemistry I and II* Three Credit Hours  
CHEM 306 Each Semester

Prerequisites: MATH 132 or MATH 107; PHYS 204/254 or PHYS 222/272; CHEM 152/162 or CHEM 154/164 or permission of department head.

Corequisite for CHEM 305: CHEM 315 (except biochemistry specialty majors)

Corequisite for CHEM 306: CHEM 316

CHEM 305 provides a detailed study of the postulates of quantum mechanics, simple quantum mechanical systems, approximation methods, many-electron systems, bonding, and spectroscopy. CHEM 306 provides a detailed study of statistical mechanics, the kinetic theory of gases, the laws of thermodynamics, equilibrium, and kinetics and mechanics of reactions.

Lecture: three hours.

CHEM 308 *Introduction to Chemical Research* Two Credit Hours

Prerequisite: CHEM 208

Required of all chemistry majors; elective to others.

This course is an introduction to the literature of chemistry and the basics of developing a research project. Students will be introduced to both computer and print-based literature searches and will apply these skills as they research their thesis topics under the direction of a faculty research advisor.

Lecture and discussion: two hours.

CHEM 309 *Current Topics in Chemistry* Three Credit Hours

Prerequisites: A two-semester sequence of Introduction to Chemistry, CHEM 103/104 or General Chemistry, CHEM 151/152.

General elective only.

Interesting current topics will be presented at a level appropriate for students with a general chemistry background. The topics will be determined by student interest and faculty availability.

Lecture: three hours.

CHEM 315 and *Physical Chemistry I & II Laboratory* One Credit Hour  
CHEM 316 Each Semester

Prerequisite: MATH 107 or MATH 132

Corequisites or prerequisites: CHEM 305 and CHEM 306

Required of all chemistry majors; CHEM 316 is required for biochemistry specialty majors; elective to others.

The first semester course will be devoted to attaining skills in the evaluation, analysis, and presentation of experimental data. Topics covered will include graphing techniques, error analysis, extraction of useful quantities from raw data, and the use of spreadsheets. Experiments will be performed on topics covered in CHEM 305. The second semester work will be a hands-on study of experimental physical chemistry on topics covered in CHEM 306, emphasizing the acquisition of data that can be analyzed using the skills learned in the first semester.

Laboratory: three hours.

CHEM 319 *Applied Current Topics in Chemistry* Three Credit Hours

Prerequisites: A two-semester sequence of Introduction to Chemistry, CHEM 103/104 or General Chemistry, CHEM 151/152.

General elective for all majors.

Interesting topics will be presented at a level appropriate for students with a general chemistry background. This course will utilize a laboratory component.

CHEM 320 *Polymer Chemistry* Three Credit Hours

Prerequisites: CHEM 208 and CHEM 305 or approval of the instructor

A general overview of polymer chemistry which includes mechanisms of polymerization, reactions of monomers, molecular weight distributions and limitations, polymer morphology and rheology, structure elucidation, applications, and industrial processing.

Lecture: three hours.

CHEM 330 *Methods and Applications of Science* Three Credit Hours

Prerequisites: CHEM 152/162 or CHEM 154/164

A practical experience in the design and implementation of laboratory and field exercises appropriate for secondary level science classes. Applications of science and the scientific method in society are emphasized. Safety in the laboratory and on field experiences as well as science fair preparation are included.

Lectures: two hours; laboratory: three hours

CHEM 401 *Inorganic Chemistry I* Three Credit Hours

Prerequisites: CHEM 208 or approval of instructor

Required of all chemistry majors.

An introduction to the systematic chemistry of the elements and the structures and reactions of their compounds. Topics covered include atomic and bonding theories, acid-base theories, symmetry and spectroscopy, and chemistry of the main group elements.

Lectures: three hours.

CHEM 402 *Inorganic Chemistry II* Three Credit Hours

Prerequisite: CHEM 401

The chemistry of the transition metals, including bonding theories, coordination compounds, organometallic chemistry, catalysis and bioinorganic chemistry.

Lecture: three hours.

CHEM 403 *Special Topics in Chemistry* Three Credit Hours

Prerequisites: CHEM 208 or permission of the instructor.

An in-depth study of a selected topic in chemistry that requires a thorough understanding of organic chemistry. Topics vary depending on student interest and instructor availability.

Lecture: three hours.

CHEM 404 *Advanced Topics in Chemistry* Three Credit Hours

Prerequisites: CHEM 300 and CHEM 305

Elective course.

A detailed study of a selected contemporary topic will be presented at a level that requires comprehension of the subject matter covered in the physical chemistry and quantitative analysis courses.

Lecture: three hours.

CHEM 409 *Biochemistry I* Three Credit Hours

Prerequisites: CHEM 207, CHEM 208, CHEM 217, and CHEM 218

Elective course.

A coverage of the chemistry of amino acids, peptides and proteins; enzymes; biochemical energetics; Krebs's cycle; electron transport system and oxidative phosphorylation; and amino acid metabolism.

Lecture: three hours.

CHEM 410 *Biochemistry II* Three Credit Hours

Prerequisite: CHEM 409 or permission of the instructor.

A continuation of the topics covered in Biochemistry I. Topics include lipids with emphasis on fatty acid oxidation, synthesis and lipid biosynthesis, and carbohydrates and their metabolism, and nucleic acid biochemistry.

Lecture: three hours.

CHEM 419 *Senior Research I* Three Credit Hours

Required of all Chemistry majors; elective to others with permission of the instructor.

This course provides an introduction to a research topic of the student's choosing and under the direction of a faculty advisor. After the topic has been approved by the faculty advisor, the student will be allowed to initiate the project. Using this topic, the student will be required to develop a research proposal which will be presented in the form of a seminar to the Chemistry Department Faculty and the chemistry majors.

CHEM 420 *Senior Research II* Three Credit Hours

Prerequisite: CHEM 419

A continuation of CHEM 419 in which the research project is completed and the data and results are compiled into a senior thesis. To finalize the project, the student will present a seminar to the Chemistry Department Faculty and chemistry majors and defend the thesis before a committee of faculty members from the Chemistry Department.

CHEM 429 *Literature Seminar* One Credit Hour

Prerequisites: CHEM 152/162 or CHEM 154/164; CHEM 208/218.

A current topics course that involves discussions of relevant biochemistry journal articles and related materials.

CHEM 460 *Biochemistry Laboratory* One Credit Hour

Corequisite: CHEM 409 OR CHEM 410

Covers experimental techniques commonly used in biochemistry including protein isolation and characterization, enzyme kinetics, isolation and manipulation of DNA, reactions and characterization of lipids and carbohydrates.

Laboratory: three hours.

## Department of Health and Human Performance

Department Head: Bott  
 Professors: Davakos, Garner  
 Associate Professor: Bott  
 Assistant Professors: Bornstein, Imam, Sacko, Sole, Yee  
 Instructors: Bogle, Triantafyllidis

The purpose of the Department of Health and Human Performance is to provide an exemplary educational environment and experiences leading to acquisition of skills, knowledge, and dispositions within the domains and scientific understanding and application of human movement and healthful living. Competence within each of these areas contributes to preparation of principled leaders for positions of leadership within their respective fields.

### Required HHP

The HHP program is designed to provide an exemplary educational environment and experiences which contribute to an improved quality of life for the student. The program offers basic instruction in adult and lifetime physical fitness, healthful living, physical activities and recreational sports of immediate and lasting value to each student.

**All cadets are required to successfully complete four semesters of RPED.**

**All cadets must successfully complete RPED 250 and RPED 251.**

RPED 250     *Contemporary Health Foundations*     Two Credit Hours

The purpose of this course is to provide basic information in personal health, drug and substance use and abuse, nutrition, stress management and human sexuality. The course is designed to provide a knowledge base for health maintenance and development of proper health values.

Lecture: two hours.

RPED 251     *Foundations of Physical Fitness  
and Exercise*     Two Credit Hours

This course is designed to teach students what physical fitness is; why they should be fit; how they can evaluate physical fitness; and what can be done to develop, maintain and improve levels of physical fitness. Basic exercise physiology, body mechanics, exercise programs and prescriptions are taught.

Lecture: two hours.

**All cadets must successfully complete two different activity (100 level) RPED courses. Cadets may elect any two activities from the following courses.**

RPED 103     *Beginning Swimming*     0 Credit Hours

A beginning swimming course designed for adults who are classified as non-swimmers or poor swimmers.

RPED 105     *Intermediate Swimming and Emergency  
Water Safety*     0 Credit Hours

Prerequisite: Swimming proficiency

A course consisting of instruction in five basic swimming strokes, self-rescue, basic lifesaving techniques and emergency water safety.

RPED 110     *Individualized Physical Education*     0 Credit Hours

A course providing an individualized approach to health-related aspects of physical fitness, including, but not limited to, cardiorespiratory and muscular endurance, strength, flexibility and body composition.

RPED 111     *Beginning Racquetball*     0 Credit Hours

A course designed to provide instruction in rules, skills and strategies of playing racquetball.

RPED 113     *First Aid and CPR (ARC)*     0 Credit Hours

A certification course of the American Red Cross for community first aid and cardiopulmonary resuscitation for adults, children and infants.

RPED 114     *Lifeguarding (ARC)*     0 Credit Hours

Prerequisites: Swimming proficiency

Corequisite: RPED 117

A certification course designed to teach skills and knowledge required to properly assume responsibilities of a lifeguard. Completion of this course may result in ARC lifeguarding certification.

RPED 115     *Water Safety Instruction (ARC)*     0 Credit Hours

Prerequisites: Swimming proficiency

An instructor course which may result in ARC certification for all levels of swimming instruction.

RPED 116     *Lifeguard Instructor (ARC)*     0 Credit Hours

Prerequisites: RPED 114 or a current ARC lifeguard training certificate.

An instructor course which may result in ARC certification for water safety and lifeguarding instruction.

RPED 117     *CPR for the Professional Rescuer*     0 Credit Hours

Corequisite: RPED 114

A certification course of the American Red Cross for lifeguards, fire officers, police officers, and others with a duty to provide care. Includes adult, child, infant, two-person and bag valve mask CPR.

RPED 122 *Archery* 0 Credit Hours  
A course which provides instruction in basic knowledge and skills of target archery.

RPED 124 *Beginning Golf* 0 Credit Hours  
A course which teaches grip, stance, and swing development, as well as knowledge of rules and strategy of recreational and competitive golf.

RPED 126 *Judo* 0 Credit Hours  
A comprehensive coverage of history, dojo etiquette, ukemi (break-fall), nagewaza (throwing), and ne-waza (grappling) techniques.

RPED 127 *Skin and SCUBA Diving I* 0 Credit Hours  
Prerequisite: Swimming proficiency  
Basic techniques of using mask and snorkel are taught. Material is presented to provide information related to underwater physics and physiology. This course will prepare a student for confined water SCUBA work. This is not a certification course, but a prerequisite that may lead to eventual PADI certification.

RPED 128 *Skin and SCUBA Diving II* 0 Credit Hours  
Prerequisite: RPED 127 or completion of PADI's five academic modules and approval of instructor.  
Confined water practice using SCUBA equipment. Completion of this course may result in a PADI Referral certificate for open water certification dives.

RPED 129 *Beginning Tennis* 0 Credit Hours  
A course which emphasizes grip, stance, footwork, and basic movement patterns in executing serve and ground strokes and stresses knowledge of rules and etiquette.

RPED 130 *Weight Training* 0 Credit Hours  
A course which stresses proper lifting techniques as well as knowledge concerning the relationship between strength training and various sports programs.

RPED 134 *Jogging* 0 Credit Hours  
A course which presents jogging as a means of developing and maintaining a satisfactory level of cardiorespiratory fitness.

RPED 135 *Intermediate Tennis* 0 Credit Hours  
Prerequisite: RPED 129 or equivalent.  
This course requires minimal skills (serve, forehand, and backhand ground strokes) and presents more advanced skills such as lob, smash and net play in addition to advanced strategy in singles and doubles play.

RPED 136 *Sailing and Canoeing* 0 Credit Hours  
Prerequisite: Swimming proficiency  
A course which includes basic knowledge and skill concerning small sailing craft and canoes.

RPED 137 *Beginning Kayaking* 0 Credit Hours  
A course designed to teach basics of flat water kayaking for lakes and oceans.

RPED 140 *Sigma Delta Psi* 0 Credit Hours  
A course designed to prepare a student for thirteen sports/fitness skill tests required for membership in this national athletic fraternity.

RPED 142 *Orienteering* 0 Credit Hours  
A presentation of skills for cross-country running with map and compass.

RPED 143 *Water Skiing* 0 Credit Hours  
A progressive presentation of water skiing skills from land drills through proper power boat handling to basic, intermediate and advanced techniques with double and single (slalom) equipment.

RPED 148 *Beginning Yoga* 0 Credit Hours  
A course presenting basic philosophy, positions and breathing techniques of yoga. Emphasis is also placed on meditation and positive thinking as means to reduce stress and increase concentration.

RPED 149 *Taekwon-Do* 0 Credit Hours  
Taekwon-Do is a Mixed Martial Art designed in the 1950s for the Korean Army. This is an introductory course teaching basic kicks and punches on a heavy bag and pads, take downs, and no gi self defense standing up and on the ground.

RPED 150 *Kendo* 0 Credit Hours  
An introduction to Kendo, or Japanese fencing, requires rules, basic techniques, and customs and courtesies of Kendo be learned. The first three Nihon Kendo Kata will also be taught. Students are expected to learn proper care and use of kendo equipment and clothing. Students successfully completing the course will have begun learning the U.S. Kendo Federation requirements for the rank of first kyu.

RPED 151 *Aerobic Activities* 0 Credit Hours  
This course will cover rhythmic and step aerobic techniques. Students will study techniques used in both systems as well as health issues in weight reduction and physical fitness development.

RPED 155 *Special Topics* 0 Credit Hours

These courses allow students to take activity courses not offered on a regular basis. Examples include cardio fitness, pilates, Jujitsu, boating and boating safety and advanced kayaking.

### Degree Options within Health and Human Performance

The purpose of the professional preparation program is to prepare undergraduate students for selected involvement within the broad fields of health and human performance while maintaining reasonable flexibility for adaptation beyond the specialty area. This is accomplished by offering professional opportunities within three degrees: B.S. in Physical Education - Teaching, B.S. in Exercise Science, and B.S. in Sport Management.

#### B.S. in Exercise Science

The B.S. in Exercise Science is designed to provide an exemplary educational environment and experiences leading to acquisition of skills, knowledge and attitudes within scientific understanding and application of human movement and performance. Competence within these areas contributes to preparing our students for graduate education and leadership positions in health and allied health professions, public and private health agencies and the wellness and fitness industry.

A student in the Exercise Science degree must complete the curriculum which includes four (4) of the following approved elective courses:

BIOL 102	General Biology II
BIOL 209	Environmental Science
BIOL 290	Microbiology
BIOL 308	Genetics
CHEM 103	Introduction to Chemistry I
CHEM 104	Introduction to Chemistry II
CHEM 151	General Chemistry I
CHEM 152	General Chemistry II
CHEM 207	Organic Chemistry I
CHEM 208	Organic Chemistry II
CHEM 409	Biochemistry I
CHEM 410	Biochemistry II
CSCI 110	Microcomputer Applications
HLED 310	Introduction to Gerontology
HLED 403	Human Sexuality
HLED 404	Public Health
HLED 408	Health and Epidemiology
HLED 410	Consumer Health
HLED 410/411	Special Topics
PHED 408	Sport Psychology
PHED 411	Special Topics in Health, Exercise, Sport Science, and Physical Education
EXSC 315	Techniques of Conditioning in Sport

EXSC 317	Medical Terminology
EXSC 411	Special Topics for Exercise Science
EXSC 412	Fundamentals of Personal Training
EXSC 420	Research Project
PHYS 203	College Physics I
PHYS 204	College Physics II
PHYS 221	Physics with Calculus I
PHYS 222	Physics with Calculus II
PSYC 201	General Psychology
PSYC 304	Abnormal Psychology
PSYC 306	Theories of Personality
PSYC 404	Industrial/Organizational Psychology
PSYC 201	General Psychology
SOCI 201	Introduction to Sociology
STAT 160	Statistical Methods
NURS 200	Introduction to Nursing
NURS 201	Health Assessment
NURS 301	Adult Health I

#### B. S. in Physical Education (Teaching)

The teaching track is designed to provide an exemplary educational environment and experiences leading to acquisition of skills, knowledge and dispositions within domains for human movement, growth and development of individuals; and application of physical, biological and behavioral sciences to the teaching/learning process. Competence within each of these areas contributes to development of our students in accordance with state and national standards, and prepares them for leadership positions in schools. The curriculum for prospective physical education teachers is designed to build progressively upon meaningful concepts and experiences acquired within other disciplines as well as those unique to the profession. In addition, competencies identified with successful teaching methodology are an integral part of the curricular content.

#### Assignment to Pre-Physical Education (Teaching Track)

Students interested in teaching physical education at K-12 grade levels are first assigned as Pre-Physical Education (Teaching Track). At this level of admission, the student's responsibility is to successfully complete all three parts of the PRAXIS I examination and to ensure official records of passing PRAXIS I scores are on file at The Citadel. Successful completion of this test of basic skills in reading, writing, and mathematics is a requirement for admission to Physical Education (Teaching Track) major, and this requirement should be met by end of sophomore year. In addition, a student is responsible to make certain, with counsel of his or her advisor, to follow the appropriate curriculum. A student should also be aware of the importance of maintaining a cumulative grade point ratio of at least 2.750 to allow admission to the Physical Education (Teaching Track) major.



### Admission to Physical Education (Teaching Track) Major

To be admitted to the Physical Education (Teaching Track) Major, a student enrolled in Pre-Physical Education (Teaching Track) must have the support of his or her advisor relative to suitability and interest in teacher education and must also have:

1. Official records of passing scores on all three parts of PRAXIS I exams on file at The Citadel, or a score of 1650 on the new SAT (1100 on the old SAT), or 24 on ACT;
2. Professional dispositions evaluation;
3. Maintained a cumulative Grade Point Ratio of 2.750 or higher on at least 45 credit hours of coursework taken at The Citadel;
4. Successfully completed PHED 101, PHED 200, PHED 201, PHED 203 and PHED 235 with a grade of “C” or better.

Students who have not met all these requirements by end of their sophomore year will not be permitted to enroll in 300- or 400-level courses in the major and will be encouraged to consider another major.

The Citadel School of Education Guidelines and Policies regarding transition points and common assessments must be met.

### Admission to the Internship in Teaching (PHED 499)

Students must make formal application for admission no later than May 1<sup>st</sup> of the previous academic year for admission to the spring internship in teaching. This internship is not normally offered to students in fall semesters. This application will be reviewed by faculty of the Department of Health and Human Performance and will include, among other things, recommendations from professors in completed professional education courses and an evaluation by the student’s advisor regarding the student’s suitability and interest in teacher education. In addition, a student must have:

1. Completed (with a GPA of at least 2.750) all required coursework except PHED 404, 421 and 499;
2. Completed the following professional education courses with the cumulative GPA of at least 2.750: EDUC 202, 206, 301, 306, 307; PHED 101, 200, 201, 203, 235, 300, 305, 314, 319, 321, 335, 350, 433, 460; and HLED 407;
3. Successfully completed all previous field experiences (100 hours);
4. On file at The Citadel official records of the appropriate PRAXIS II test score(s).

The Director of Teacher Education will be informed of results of this review and will send official notice of admission or rejection to the student. In the absence of significant extenuating circumstances, a student not eligible for the Internship in Teaching will be required to change majors.

### Graduation Requirements

To meet graduation requirements, the Physical Education (Teaching Track) major must complete all requirements of the course of study and must have earned a GPA of at least 2.750 on each of the following: all cumulative coursework and all professional education courses. In addition, passing scores on the appropriate PRAXIS II and Principles of Learning and Teaching (PLT) exams must be on file at The Citadel.

Completion of curricular requirements may result in licensure by the South Carolina Department of Education to teach physical education in grades K-12. **A grade of “C” or better in PHED 499 is necessary to qualify for teacher certification.**

Additional licensure in health education may be pursued through 12 hours of required courses (\*) and 12 hours of electives selected from among the following offerings. Successful completion of the health specialty of the Praxis II and Principles of Learning and Teaching (PLT) exam is also required, and official results must be on file at The Citadel.

<b>*Required Courses</b>		<b>Credit Hours</b>
BIOL 217	Human Anatomy and Physiology I	3
BIOL 218	Human Anatomy and Physiology II	3
HLED 400	First Aid/Emergency Care	3
HLED 407	Methods of Teaching School Health Education	3
		12
<b>Approved Electives</b>		<b>Credit Hours</b>
HLED 302	Drug and Substance Abuse	3
HLED 401	Nutrition	3
HLED 403	Human Sexuality	3
HLED 404	Public Health	3
HLED 408	Health and Epidemiology	3
HLED 410	Consumer Health	3

Successful completion of RPED 250 (Contemporary Health Foundations) and RPED 251 (Foundations of Physical Fitness and Exercise) will be credited as one approved elective course.

### B.S. Sport Management

The B.S. in Sport Management is designed to provide an exemplary educational environment and experiences leading to acquisition of skills, knowledge and attitudes within domains for management and administration of sport, exercise and recreation. Competence within each of these areas contributes to preparing our students for graduate education and leadership positions in sport management and sport professions, including the recreational industry, college/university sports, resort sports programming, intramural-club-recreational sports programs, and management positions within the wellness and fitness industry.

A student in the Sport Management/Administration option must complete the professional curriculum and select six (6) of the following courses as approved electives.

BADM 201	Principles of Macroeconomics
BADM 212	Introduction to Managerial Accounting
BADM/	
COMM 216	Communications in Business
BADM 305	Legal and Ethical Environments of Business
BADM 317	Computer Applications in Business
BADM 320	International Business
BADM 321	Business Finance
BADM 338	Management and Organizational Behavior
BADM 371	Leadership in Organizations
BADM 405	Marketing Management
BADM 409	Human Resource Management
BADM 414	Consumer Behavior
BADM 425	Small Business Management-Entrepreneurship
ENGR 401	Project Management Career Skills
PESM 301	The Governance of Sport
PESM 302	Sport Communications
PESM 305	Risk Management in Sport
PESM 402	Sport Sales
PHED 408	Introduction to Sport Psychology
PHED 411	Special Topics in Health, Exercise, and Sport Science
PHED 420	Senior Research Project

**Minor in Sport Coaching  
(Please refer to p. 157)**

**Minor in Sport Management  
(Please refer to p. 158)**

**Health and Human Performance Course Descriptions**

- EXSC 200 *Motor Development and Motor Learning* Three Credit Hours  
Instruction will focus on the study of sequential changes and characteristics of physical growth and development related to physical activity across the lifespan. Consideration of factors associated with individual differences in attaining motor proficiency during childhood, adolescence, and adulthood will be examined. A field experience component of a minimum of 5 hours is required.  
Lecture: three hours
- EXSC 202 *Care and Prevention of Athletic Injuries* Three Credit Hours  
Prerequisite: BIOL 317  
Corequisite: BIOL 318  
Discussion, demonstration, and application of skills and procedures utilized in athletic training.  
Lecture: three hours
- EXSC 305 *Measurement and Evaluation* Three Credit Hours  
A course including test selection and administration, analysis and interpretation of data for various cognitive, affective and psychomotor tests commonly associated with health, exercise, sport, and physical education.  
Lecture: three hours

- EXSC 314 *Biomechanical Kinesiology* Three Credit Hours  
Prerequisites or corequisites: BIOL 217, BIOL 218, BIOL 227, and BIOL 228  
The anatomical and mechanical analysis of functional posture and motor performance for the purpose of improving teaching and coaching effectiveness.  
Lecture: three hours

- EXSC 315 *Techniques of Conditioning for Sports* Three Credit Hours  
The purpose of this course is to provide students with the fundamental concepts of human physiology and exercise physiology as they apply to programs of physical conditioning, training, and physical fitness. Theories, current research, and laboratory techniques for assessing human physiological responses to exercise, physical training, health-related physical fitness, and sport performance will be studied. This class is designed as a preparation for the Certified Strength and Conditioning Specialist (CSCS) exam.  
Lecture: three hours

- EXSC 317 *Medical Terminology* Three Credit Hours  
The purpose of this course will be to introduce students to medical terminology as it relates to such areas as the skeletal, muscular, cardiovascular, lymphatic, immune, respiratory, digestive, urinary, nervous, skin, endocrine, and reproductive systems.  
Lecture: three hours

- EXSC 319 *Physiology of Exercise I* Three Credit Hours  
Prerequisites: BIOL 317 or BIOL 318  
An in-depth study of effects of exercise upon components of physical fitness, including strength, muscular endurance, flexibility and cardiovascular-respiratory endurance.  
Lecture: three hours.

- EXSC 320 *Physiology of Exercise II* Three Credit Hours  
Prerequisite: EXSC 319  
This course will build upon the fundamentals of *Physiology of Exercise I*, developed during previous Health and Human Performance coursework. The purpose of this course is to provide a more in-depth examination of the major content areas of the exercise physiology discipline including, but not limited to, the following topics: cardiovascular adaptations to exercise training, skeletal muscle adaptations to training, exercise endocrinology, and environmental exercise physiology.  
Lecture: three hours.

- EXSC 329 *Physiology of Exercise I Lab* One Credit Hour  
Prerequisites: BIOL 317 or BIOL 318  
Corequisite: EXSC 319  
This course will provide the laboratory component associated with EXSC 319, *Physiology of Exercise I*.  
Lab: two hours.

EXSC 403 *Exercise Testing and Prescription* Three Credit Hours

Prerequisites: EXSC 319, EXSC 320 and EXSC 329

Instruction will focus on the principles of exercise testing and assessment of fitness. Focus will also be placed on the development of an exercise prescription to enhance fitness, improve health, and reduce risk factors in healthy and diseased populations, across the lifespan.

Lecture: three hours

EXSC 411 *Special Topics in Health, Exercise, and Sport Science* Three Credit Hours

A course designed for specialized study of a current topic in fields of health, exercise, and sport science.

Lecture: three hours

EXSC 412 *Fundamentals of Personal Training* Three Credit Hours

A study of the fundamental concepts of basic exercise science, human movement science, fitness assessment, training (flexibility, cardiorespiratory, core, balance, resistance, speed, agility, and quickness), nutrition, and behavior modification, as they apply to program development for improving fitness and health. Theories, current research, and field-based techniques for assessing human physiological and behavioral responses to exercise will be studied. This class is designed as a preparation for the National Academy of Sports Medicine's Certified Personal Trainer exam.

Lecture: three hours

EXSC 420 *Senior Research Project* Three Credit Hours

A research problem conducted as an independent study. Topic and procedure for this study must be approved by department faculty.

EXSC 421 *Senior Seminar in Health, Exercise, Sport Science, and Physical Education* One Credit Hour

A seminar conducted for the purpose of reviewing subject matter from all courses in the health, exercise, and sport science curriculum. An opportunity is provided to apply what has been learned to a written project and oral presentation requiring critical thinking, creativity, and problem solving.

PHED 101 *Introduction to Health and Human Performance* Three Credit Hours

A study of philosophies, aims, objectives and principles of health, exercise, sport science, and physical education. Professional development and career opportunities are also emphasized.

Lecture: three hours

PHED 201 *Introduction to Teaching Physical Education and Coaching* Three Credit Hours

This course begins with an exploration of the theoretical underpinnings that promote motor learning. The course develops student awareness of the many variables that affect the ability for students and athletes to improve performance or technique. Specifically, the course seeks to develop practical skills in planning, task presentations, demonstrations, content development, observational analysis, and feedback.

A 10-hour field experience is required for this course.

Lecture: three hours

PHED 303 *Adapted Physical Education And Sport* Three Credit Hours

A course to prepare students for accommodating persons with disabilities in situations involving access to facilities and equipment, physical fitness assessment and programming, sports participation and competition, and as a team member within various professional settings.

A 10-hour field experience is required for this course.

Lecture: three hours

PHED 335 *Advanced Performance and Athlete Development: Team Sports* Three Credit Hours

The course emphasizes methods of teaching and/or coaching variety of sports including popular invasion games and team sports. The examination of theoretical models sets the stage for the development of best practice in terms of athlete development and successful coaching. Topics include coaching for character, managing athletes, tactical coaching, observational analysis of performance, and physical training basics.

Lecture: three hours

A 10 hour field experience is required for this course.

PHED 350 *Advanced Performance and Athlete Development: Individual and Dual Sports* Three Credit Hours

The course emphasizes methods of teaching and/or coaching variety of sports including net/wall games and individual/dual sports. The examination of theoretical models sets the stage for the development of best practice in terms of athlete development and successful coaching. Topics include developing a coaching philosophy, effective communication strategies, motivation, and principles of teaching.

Lecture: three hours

A 10 hour field experience is required for this course.

PHED 404 *Administration of Health, Exercise, Sport Science, and Physical Education* Three Credit Hours

A study of administrative philosophies and procedures related to health, exercise, sport science, and physical education.

Lecture: three hours

PHED 406 *Directed Field Experience* Three Credit Hours

A controlled exposure to professional experiences in a selected area, e.g. athletic coaching, athletic training, physical therapy, intramurals, recreation, recreation therapy, sport business, and public health education.

A field experience component of a minimum of 100 hours is required.

PHED 408 *Introduction to Sport Psychology* Three Credit Hours

Analysis and interpretation of current research including maturation and development, learning theory, perception, personality, motivation and group dynamics related directly to sport, exercise, physical education, and competitive athletics.

Lecture: three hours

PHED 411 *Special Topics in Health, Exercise, Sport Science, and Physical Education* Three Credit Hours

A course designed for specialized study of a current topic in fields of health, exercise, sport science, and physical education.

Lecture: three hours

PHED 420 *Senior Research Project* Three Credit Hours

A research problem conducted as an independent study. Topic and procedure for this study must be approved by department faculty.

PHED 421 *Senior Seminar in Health, Exercise, Sport Science, and Physical Education* One Credit Hour

A seminar conducted for the purpose of reviewing subject matter from all courses in the health, exercise, sport science, and physical education curriculum. An opportunity is provided to apply what has been learned to a written project and oral presentation requiring critical thinking, creativity, and problem solving.

PHED 433 *Elementary School Physical Education* Three Credit Hours

Prerequisite: Admission to Physical Education Teaching Program; PHED 201

Study of the progressively graded program of activities for elementary schools, grades K-5. Theoretical as well as practical material will be presented.

A field experience component of a minimum of 15 hours is required.

Lecture: three hours

PHED 460 *Secondary Physical Education Training Methods* Three Credit Hours

Prerequisite: Admission to Physical Education Teaching Program and PHED 201.

The course emphasizes methods of teaching that are consistent with the intent of the national and state standards. Students will be able to design and implement a program geared towards the achievement of valued health outcomes such as increased physical activity levels. Topics include health-related fitness assessment, personal program development, and instruction based on lifetime activities.

A 15-hour field experience is required for this course.

Lecture: three hours

PHED 499 *Internship in Teaching* Twelve Credit Hours

Prerequisite: 100 hours field experience (minimum).

Please refer to requirements for admission to the Internship in Teaching (PHED 499).

A requirement for certification, observation and teaching in approved schools under approved supervising teachers and supervision by college instructor. Assignment only in major teaching field. All students must provide their own transportation.

Two placements are required: one in an elementary school setting and one in a secondary school setting. A field experience component of a minimum of twelve weeks is required. Formal application for admission to the spring teaching internship must be made no later than 1 May of the previous academic year.

HLED 302 *Drug and Substance Abuse* Three Credit Hours

A study of characteristics of commonly abused drugs and substances and reasons for use and abuse.

Lecture: three hours

HLED 310 *Introduction to Gerontology* Four Credit Hours

This course addresses both the pragmatic and theoretical issues of aging. Interdisciplinary methods of social, biological, and medical sciences are utilized to examine and define the aging process. Family and societal relationships, ethnic and multicultural, economic and political concerns of aging are also addressed.

Lecture: three hours; laboratory: one hour

HLED 400 *First Aid and Emergency Care* Three Credit Hours

Prerequisite: RPED 113

A comprehensive coverage of safety concepts and accident prevention as well as presentation of specific topics including cursory examination, wounds, traumatic shock, asphyxia, cardiac arrest, burns, toxins; and bone, joint and muscle injuries.

For health, exercise, and sport science majors only or with department head approval.

Lecture: three hours

HLED 401 *Nutrition* Three Credit Hours

A detailed study of primary nutrients essential to health with attention given to specific needs from infancy through adulthood. Current theories and practices related to physical and intellectual performances are also investigated. Contemporary topics are presented, including degenerative diseases, food-borne diseases, fad dieting, food additives, and health foods.

Lecture: three hours

HLED 402 *Sport Nutrition* Three Credit Hours

Prerequisite: HLED 401

The course examines the interaction of sport and exercise and nutrition. The purpose of this course is to provide an in-depth examination of specific areas of nutrition as they relate to exercise and sport and include such topics as: bioenergetics, macro and micronutrients, water and temperature regulation, body weight regulation and body composition, and food drugs and supplements.

Lecture: three hours

HLED 403 *Human Sexuality* Three Credit Hours

A comprehensive study of all facets of human sexuality. A course designed to prepare potential health educators in curriculum design for all grade levels, teaching methods, teaching styles, and evaluation methods.

Lecture: three hours

HLED 404 *Public Health* Three Credit Hours

Analysis of public health trends, services, funding, and organization of local, state and federal agencies.

Lecture: three hours

HLED 406 *The School Health Program* Three Credit Hours

A study of the total school health program and roles of health and physical education within the program.

Lecture: three hours

HLED 407 *Advocacy and Accountability  
in Public Health and Education* Three Credit Hours

A review of curricula available for teaching health and physical education in grades K-12. Focus is on constructing and implementing developmentally appropriate movement and fitness experiences for elementary/middle/secondary school learners from various backgrounds. A review of curricular models available for teaching health and physical education including curriculum.

Lecture: three hours

A five hour field experience is required for this course.

HLED 408 *Health and Epidemiology* Three Credit Hours

A course designed to acquaint the potential health educator or public health worker with the science of epidemiology and techniques used in the study of disease and non-disease conditions.

Lecture: three hours

HLED 410 *Consumer Health* Three Credit Hours

A course designed to provide factual and scientifically-based information about medical goods and services as well as development of consumer skills including decision-making, values clarification, assertiveness, bargaining, bidding, data collection, and data analysis.

Lecture: three hours

HLED 411 *Special Topics in Health, Exercise,  
and Sport Science* Three Credit Hours

A course designed for specialized study of a current topic in the fields of health, exercise, and sport science.

### Sport Management Courses

PEM 201 *Introduction to Sport Management* Three Credit Hours

An orientation and foundational study of the field of sport management including types of careers, and training and experiences necessary for success. An introduction to characteristics of successful managers as well as principles of management will be discussed.

Lecture: three credits

PEM 202 *Social and Cultural Aspects of Sport* Three Credit Hours

An examination of social and cultural aspects affecting sport, including race, gender, ethnicity, violence, politics, deviance, and economics.

Lecture: three credits

PEM 301 *The Governance of Sport* Three Credit Hours

An examination of organizational structure, managerial practices, decision-making processes, and policy formation for sport and exercise organizations at local, regional, national, and international levels. Discussions will be conducted on how national and international politics, political systems, and policies effect sport and exercise organizations.

Lecture: three credits

PEM 302 *Sport Communications* Three Credit Hours

An introduction to basic knowledge, skills, understanding, and implementation of media and its relationships with sport and exercise industries. Emphasis will be on building and managing effective media and communications programs through study and analysis of publications, statistics, news releases, publicity, press releases, media packets, and public relations.

Lecture: three credits

PEM 303 *Sport Facility Management* Three Credit Hours

Students will focus on advanced management principles, practices, and methods important to successfully operating public and private sport facilities. Budgeting, operations management, marketing, sponsorships, registrations, hospitality, and volunteer management will also be emphasized.

Lecture: three credits

PESM 304 *Sport Marketing* Three Credit Hours

Prerequisites: Successful completion of PESM 201, PESM 202, and BADM 309 or permission of instructor.

An examination of theories, fundamentals, and practical applications of marketing to sport and exercise industries. Comparisons will be made between marketing in general business as opposed to sport and exercise industries.

Lecture: three credits

PESM 305 *Risk Management in Sport* Three Credit Hours

This course is designed to introduce students to legal principles applicable to a variety of sport settings. Topics of tort liability applicable to sport will be explored in depth with special emphasis on effective management of risk.

Lecture: three credits

PESM 401 *Legal Aspects of Sport* Three Credit Hours

An introduction to law, legal system, and liability issues as apply to sport and exercise industries. Examination will be made of legal issues and problems confronting sport and exercise managers. Focus will be on liability, tort, agency, antitrust-labor, contract, equal opportunity, and constitutional law.

Lecture: three credits

PESM 402 *Sport Sales* Three Credit Hours

This course is designed to introduce students to basic and essential principles and concepts of personal selling and sales management in the sports marketplace.

Lecture: three credits

PESM 404 *Leadership in Health, Exercise, and Sport Science Organizations* Three Credit Hours

A study of administrative philosophies and procedures related to health, exercise, sport science, and/or sport management.

Lecture: three credits

PESM 405 *Event Management: From Theory to Practice* Three Credit Hours

An examination of the fundamental principles used in event management. Students will be involved in a combination of field work and seminars with the target goal of staging a sporting event as implementation of comprehensive knowledge in the Sport Management program.

Lecture: three credits

PESM 421 *Senior Seminar in Sport Management* One Credit Hour

A seminar conducted for the purpose of reviewing either subject matter from all courses in sport management or implementation of an event based upon knowledge from courses in the sport management. Opportunity is provided to apply what has been learned to a "hands-on" project and a written and oral report, requiring critical thinking, creativity, and problem solving.

PESM 499 *Internship in Sport Management* Nine Credit Hours

Prerequisites: Cadet classification of at least "2B", and successful completion of PHED 406 and BADM 202, or permission of the instructor.

Involvement in an external working environment with a host sport organization for a period of at least 400 hours. This internship will provide students opportunities to observe and receive practical field experience in selected sport management settings under direction of sport and exercise professionals.

## Department of Mathematics and Computer Science

Department Head: Chen

Professors: Banik, Chen, Groetsch, Moore, Trautman, Zhang

Associate Professors: Florez, Joshi, Mukherjee, Verdicchio, Wittman

Assistant Professors: Li, Robinson, Sun, Swart

The mission of the Department of Mathematics and Computer Science is to prepare our students and citizens of the Lowcountry to meet the mathematical and computing demands they will face in their careers and as knowledgeable citizens. To achieve this goal, the department offers the B.S. degree in mathematics; B.S. and M.S. degrees in computer science; and a variety of minors in mathematics, statistics, information systems, and computer science. In addition, the department offers courses in support of other disciplines and courses in quantitative reasoning and data analysis in support of the core educational curriculum. The department supports the disciplines of mathematics and computer science and the growth and development of educational opportunities in the Lowcountry through the graduate programs, research, and public service.

### B.S. Mathematics Major

The B.S. program in mathematics is designed to prepare our students to pursue graduate work in pure or applied mathematics and to provide the background which will enable them to use mathematics in the behavioral sciences as well as in more technical areas.

The course of study leading to the B.S. with a major in mathematics includes 18 semester hours of general electives. The required courses are 4 semester hours of computer science (CSCI 201) and the following 40 semester hours of core mathematics: MATH 121, MATH 131, MATH 132, MATH 206, MATH 231, MATH 234, MATH 240, MATH 303, STAT 261, MATH 403, MATH 470, MATH 495. In addition, the student must select 12 hours of approved Mathematics Electives from among the mathematics courses numbered at the 300 or 400 level.

### B.S. Computer Science Major

The B.S. program in computer science offers the student a sound foundation in computer science complemented by a broad core of courses in the sciences and liberal arts, a background in mathematics with sufficient breadth and depth to enable the student to deal with scientific applications as well as the theoretical basis of computer science, and an exposure to computer hardware (microprocessors) through courses offered by the Department of Electrical and Computer Engineering. Through electives, the student will have the opportunity to gain background in areas such as business administration and political science where the information processing aspects of computer science are readily applied. Upon completion of this course of study, students will be qualified for careers as system analysts, system programmers, or applications programmers in business or industry. In addition, graduates will be prepared to pursue advanced degrees in computer science or related fields. This program is accredited by the ABET Computing Accreditation Commission.

The course of study leading to the B.S. with a major in computer science includes 15 hours of electives; 14 hours of core mathematics and statistics: MATH 131, MATH 132, MATH 206, STAT 261; 39 hours of required courses in computer science: CSCI 201, CSCI 202, CSCI 223, CSCI 305, CSCI 317, CSCI 320, CSCI 355, CSCI 405, CSCI 420, CSCI 495, ELEC 311, ELEC 330, and one of CSCI 421 or CSCI 499; and 6 hours of Approved Computer Science Electives selected from among the computer science courses offered at the 300 or 400 level. The complete course of study is provided in the Courses of Study section of this catalog.

**Minor in Applied Mathematics**  
(Please refer to p. 122)

**Minor in Applied Statistics**  
(Please refer to p. 123)

**Minor in Computer Programming**  
(Please refer to p. 130)

**Minor in Cybersecurity**  
(Please refer to p. 132)

**Minor in Management Information Systems**  
(Please refer to p. 148)

### The Mathematics Placement Exam

The Mathematics Placement Exam (MPE) is given online and is designed to evaluate a student's readiness for MATH 131, Analytic Geometry and Calculus I. A student's score on the MPE determines whether or not the student will need to complete MATH 119, Precalculus, before taking MATH 131. Students who have college credit for MATH 131 or MATH 119 are exempted from the MPE.

### Mathematics Tutorials

Personal tutorial assistance for students having difficulties with freshman and sophomore level mathematics course work is provided through the Academic Support Center in Thompson Hall. Assistance is provided during the normal working day and during evening study periods. Additional materials - worksheets, workbooks, texts, journals, etc. - that complement classroom work are available.

### Mathematics Course Descriptions

MATH 104 *Elementary Mathematical Modeling* Three Credit Hours

Prerequisites: Two years of high school algebra

This course will introduce students to mathematical models of real world problems. Designed for non-technical majors, this course focuses on basic mathematical functions, modeling using those functions, properties of their graphs, and real-world applications. Functions will include linear, quadratic, higher degree polynomial, exponential, logarithmic, and logistic. Students will solve problems using algebra and a graphing calculator; they will use matrices for solving systems of linear equations; and they will be required to interpret results in writing. *Students may not receive credit for both MATH 104 and MATH 119 in meeting their core curriculum mathematics requirements.*

MATH 105 *Finite Mathematics* Three Credit Hours

Prerequisites: Two years of high school algebra

An introduction to finite mathematics with an emphasis on applications and formulation of problems in mathematical language. Topics selected from matrices, linear programming, mathematics of finance, counting methods, probability, and statistics. The course includes work using a computer software package.

MATH 106 *Applied Calculus I* Three Credit Hours

Prerequisite: Two years of high school algebra

An introduction to differential and integral calculus of polynomials, exponential, and logarithmic functions with an emphasis on applications to business and the life and social sciences. *Students may not receive credit for both MATH 106 and MATH 131.*

MATH 107 *Applied Calculus II* Three Credit Hours

Prerequisite: MATH 106 with a grade of "C" or higher or MATH 131 with a grade of "C" or higher.

A continuation of the calculus introduced in MATH 106. Topics include techniques of integration, applications of integrals, improper integrals, partial derivatives and applications, and a brief introduction to double integrals.

MATH 119 *Precalculus* Four Credit Hours

The goal of this course is to prepare students majoring in mathematics, sciences, and engineering for the required calculus sequence. Topics include polynomial, rational, exponential, logarithmic, and trigonometric functions and their graphs, with emphasis on conceptual understanding and algebraic skills necessary for success in calculus. Students in the majors above will normally start their mathematics track in Analytic Geometry and Calculus I (MATH 131). Students desiring to enhance their mathematics foundation before taking Analytic Geometry and Calculus I can opt to take this course. Students scoring below baseline on the departmental Mathematics Placement Exam must take this course. *A student who passes MATH 119 and subsequently changes to a major that does not require MATH 131 may substitute MATH 119 for MATH 104. Students may not receive credit for both MATH 104 and MATH 119 in meeting their core curriculum mathematics requirement.*

MATH 121 *Introduction to the Practice of Mathematics* Three Credit Hours

Prerequisites: None

This course is restricted to the first year mathematics majors

This course is required of all mathematics majors during the first year. It is intended to provide them with basic skills needed for independent studies and undergraduate research projects in mathematics. Among these skills are effective written and oral mathematical communication and basic facility with modern mathematical software. Instruction in written communication will include the craft of mathematical writing, the use of technology (e.g., LATEX) for creation of mathematical text, and readings of level-appropriate mathematics articles in undergraduate journals. Attendance at some departmental seminars will be required and models for effective presentations in professional venues will be discussed. An introduction to computational (e.g., MATLAB) and indexing (e.g., MathSciNet) software that will be of use throughout the four-year curriculum will be provided.

MATH 131 *Analytic Geometry and Calculus I* Four Credit Hours

Prerequisite: MATH 119 with a grade of "C" or higher, or a satisfactory score on the placement exam, or approval of the department head.

Limits, derivatives, applications of the derivative, antiderivatives and definite integrals.

Students who complete MATH 131 and change to a major that does not require MATH 132 must complete one additional MATH course. *Students may not receive credit for both MATH 106 and MATH 131.*

MATH 132 *Analytic Geometry and Calculus II* Four Credit Hours

Prerequisite: MATH 131 with a grade of "C" or higher or HONR 131 with a grade of "C" or higher

Applications of the integral, transcendental functions, techniques of integration, series and sequences of real numbers, Taylor series, power series, parametric equations and polar coordinates.



MATH 206 *Introduction to Discrete Structures* Three Credit Hours  
Prerequisite: MATH 131, or HONR 131, or a grade of “C” or higher in MATH 106 or MATH 119

Set algebra including relations and functions, propositional and predicate logic, combinatorics, graphs, and applications of these to various areas of computer science.

MATH 231 *Analytic Geometry and Calculus III* Four Credit Hours  
Prerequisites: MATH 132 or HONR 132

The analytical geometry of two and three dimensions, the differential and integral calculus of functions of two or more variables, and vector differential calculus.

MATH 234 *Applied Engineering Mathematics I* Four Credit Hours  
Prerequisite: MATH 132 or HONR 132

An integrated course in linear algebra and differential equations. Topics include differential equations of the first order and degree, linear differential equations of higher order, systems of differential equations, the Laplace transform, vector spaces, bases, linear transformations, systems of linear equations, algebra of matrices, and determinants.

MATH 240 *Linear Algebra* Three Credit Hours  
Prerequisite: MATH 132, MATH 107, or HONR 132

Systems of linear equations, algebra of matrices, inverses, determinants, vector spaces with emphasis on Euclidean vector spaces, bases, subspaces, transformations, eigenvalues and eigenvectors, and quadratic forms.

MATH 290 *Topics in Mathematics* Three Credit Hours

A study of a particular aspect of mathematics or a related area that is of interest to both mathematics majors and other majors, but is not in our list of standard courses. This course assumes no prerequisites.

MATH 303 and *Modern Algebra I and II* Three Credit Hours  
MATH 304 Each Semester

Prerequisites: MATH 206 and MATH 240.

A two-semester sequence in the algebraic structures that lie at the foundations of many areas of modern mathematics. Topics chosen from theory of groups, rings, integral domains, and fields, coding theory, Galois theory, modules, and Euclidean constructions.

MATH 305 *Modern Geometry* Three Credit Hours  
Prerequisite: MATH 132, MATH 107, or HONR 132

Special topics from axiomatic geometries. Topics include Euclidean geometry, projective geometry, non-Euclidean geometry, and metric projective geometry.

MATH 335 *Applied Engineering Mathematics II* Three Credit Hours  
Prerequisites: MATH 231 and MATH 234

Advanced topics in differential equations and multi-dimensional calculus. Topics include power series solutions of differential equations, line and surface integrals, Fourier series, vector integral calculus, special functions, and an introduction to partial differential equations.

MATH 343 *Applied Numerical Methods I* Three Credit Hours  
Prerequisites: MATH 240 or MATH 234, and knowledge of a programming language

An introduction to numerical methods. Topics include floating-point computation, finding zeros of functions, direct methods for solving systems of linear equations, interpolation, and numerical differentiation and integration.

MATH 344 *Applied Numerical Methods II* Three Credit Hours  
Prerequisite: MATH 234 and knowledge of a programming language

A further study of numerical methods. Topics include approximation, numerical solutions of ordinary differential equations, iterative methods for solving systems of linear equations, eigenvalue problems, and error analysis.

MATH 381 *Deterministic Methods of Operations Research* Three Credit Hours

Prerequisites: One semester of calculus

The theory and applications of deterministic models of operations research. Topics include linear programming and the simplex algorithm, transportation and assignment problems, graphs and network flows, dynamic programming, and sensitivity analysis.

MATH 382 *Probabilistic Methods of Operations Research* Three Credit Hours

Prerequisites: Two semesters of calculus

The theory and applications of probabilistic models of operations research. Topics include queuing models, birth and death processes, finite-state markov chains, inventory theory, forecasting, simulation, decision analysis, game theory, and reliability.

MATH 399 *Junior Research Project* Three Credit Hours

Open only to junior mathematics majors with a MATH GPA of at least 3.0.

It is required to have a written proposal accepted by the research advisor and the department head.

This course offers a mathematics junior an opportunity to complete research in an area of current interest and importance in mathematics in collaboration with a research advisor. A formal paper is required in this course. Although it is a 300-level course, this course is not approved as a departmental elective. It may be used to fulfill a general elective.

MATH 403 and *Introduction to Analysis* Three Credit Hours  
MATH 404 *I and II* Each Semester

Prerequisite: MATH 231

A two-semester sequence in real analysis. Topics include sets, functions, properties of the ordered field of real numbers, topology of the reals, sequences and series, continuity, differentiation, integration, and sequences and series of functions.

MATH 405 *Mathematical Statistics* Three Credit Hours

Prerequisites: MATH 132 and STAT 361

Axioms of probability, combinatorial probability, random variables, distribution functions, law of large numbers, central limit theorem, estimation, maximum likelihood methods, hypothesis testing, confidence intervals, and non-parametric methods.

MATH 411 *Number Theory* Three Credit Hours

Prerequisite: MATH 132, MATH 107, or HONR 132

The Euclidean algorithm, prime and composite integers, elementary Diophantine equations, Pythagorean triples, Euler's phi-functions, congruencies, Euler-Fermat theorems, exponents and primitive roots, and quadratic residues.

MATH 412 *History of Mathematics* Three Credit Hours

Prerequisite: MATH 132, MATH 107, or HONR 132

A survey of the concepts and methods of mathematics from the time of the ancients to the present. The course includes a research paper on some major mathematician or body of mathematics.

MATH 414 *Teaching Secondary School Mathematics- The Teaching Cycle* Three Credit Hours

Prerequisite: MATH 303

Students examine research-based models of teaching and learning in mathematics. Students also work in Professional Learning Communities (PLCs) within the class to model the ongoing professional development they will be expected to undertake throughout their careers. Topics include: constructing quality assessments, promoting mathematical discourse, thoughtful integration of technology, and issues of equity and access.

MATH 415 *Teaching Secondary School Mathematics- Mathematical Proficiency and Motivation* Three Credit Hours

Prerequisite: MATH 303

Topics include: unpacking the concept of mathematical proficiency in the context of Algebra I, Algebra II, and Geometry; research-based strategies for promoting student motivation; and the role of classroom culture and student identity in teaching and learning. Students will work in Professional Learning Communities (PLCs) within the class to model the ongoing professional development they will be expected to undertake throughout their careers. Students will also gain experience productively observing current in-service teachers, building skills and dispositions that are key to long-term professional growth and development.

MATH 422 *Complex Variables* Three Credit Hours

Prerequisite: MATH 231

Topics from complex function theory: complex differentiation and integration, Cauchy theorem, complex series and uniform convergence, harmonic functions.

MATH 451 *Graph Theory* Three Credit Hours

Prerequisite: MATH 206

A formal introduction to the theory and applications of graphs. Topics include connectivity, trees, Eulerian graphs, Hamiltonian graphs, planarity, graph colorings, matchings, and domination.

MATH 470 *Mathematical Models and Applications* Three Credit Hours

Prerequisite: MATH 234

An introduction to the theory and practice of building and analyzing mathematical models for real world situations encountered in the social, biological, and environmental sciences.

MATH 480 *Readings in Mathematics* Three Credit Hours

Prerequisite: Permission of the instructor

Directed reading on assigned topics in mathematics. The course includes weekly conferences with the instructor and a formal paper. Since the content of the course may change, a student may repeat the course for credit with the consent of the department head.

MATH 490 *Advanced Topics in Mathematics* Three Credit Hours

Prerequisite: Permission of the instructor

Selected topics in mathematics. The offering of this course will depend upon the interest of the students, the availability of an instructor, and approval of the department head. Since the content of the course may change, a student may repeat the course for credit with the consent of the department head.

MATH 495 *Senior Seminar in Mathematics* Three Credit Hours

Open only to senior mathematics majors.

This is a "capstone" course that will cover various topics from the undergraduate mathematics curriculum. Each student will have a substantial term project and will write a paper and make an oral presentation to departmental faculty about that topic.

MATH 499 *Senior Research Project* Three Credit Hours

Prerequisite: Approval of department head

Open only to senior mathematics majors with a MATH GPA of at least 2.500. A research project with a required formal paper. Recommended for students planning graduate work. Approval for enrollment based on the acceptance of a written proposal by the instructor and approval of the department head.

### Statistics Course Descriptions

STAT 160 *Statistical Methods* Three Credit Hours

An elementary treatment of probability and statistical concepts. Topics include descriptive statistics, probability basics, population distribution, sampling distribution and hypothesis testing for population mean. Emphasis will be placed on understanding the fundamental concepts in statistics and interpretation of statistical results. Excel/calculators are used for computation.

STAT 261 *Introduction to Probability and Statistics* Three Credit Hours  
Prerequisite: MATH 131 or MATH 106

An introduction to probability and statistical concepts. Topics include frequency distributions, probability theory, probability distributions, central limit theorem, sampling distribution, and hypothesis testing for parameters of population. A statistical package will be introduced.

STAT 290 *Topics in Statistics* Three Credit Hours  
Prerequisite: Permission of the instructor

A study of a particular aspect of statistics or a related area that is of interest to computer science, mathematics and other majors, but is not in the department list of standard courses.

STAT 366 *Applied Statistics* Three Credit Hours  
Prerequisite: STAT 160 or STAT 261 or BADM 205

A course in applied statistics covering practical statistical methods. Topics include comparisons of population means, One-way ANOVA, simple linear regression, categorical data analysis and certain nonparametric procedures. A statistical package will be introduced.

STAT 461 *Data Analysis* Three Credit Hours  
Prerequisite: STAT 366

An introduction of using statistical packages such as R to analyze data from real world examples. Topics include exploratory analysis of data, the analysis of variance, linear regression models, multiple comparisons and resampling techniques such as bootstrap method.

STAT 490 *Advanced Topics in Statistics* Three Credit Hours  
Prerequisite: Permission of the instructor  
Selected topics in statistics. The offering of this course will depend upon

the interest of the students, the availability of an instructor, and approval of the department head. Since the content of the course may change, a student may repeat the course for credit with the consent of the department head.

### Computer Science Course Descriptions

CSCI 103 *Survey of Computer Science* Two Credit Hours

The computer is examined as a machine, problem-solving tool, and information repository. An overview of the discipline of computer science is presented. Students will receive hands-on experience with the computing facilities at The Citadel, and they will learn how to research technical topics and present the results in written form.

CSCI 110 *Microcomputer Applications* Three Credit Hours

An introduction to computer systems and computer applications. Students learn to use software packages for word processing, database management, spreadsheets, and presentations with applications to management and social sciences.

CSCI 201 *Introduction to Computer Science I* Four Credit Hours  
Required for all mathematics and computer science majors.

No previous computer programming experience is needed for this course. An introduction to problem solving and algorithm development using Java.

Topics include computer organization, operating systems, structured programming, and program modularization. Assignments involve designing, coding, debugging, and documenting computer programs.

Lecture: three hours; laboratory: two hours.

CSCI 202 *Introduction to Computer Science II* Three Credit Hours  
Prerequisite: CSCI 201 with a grade of "C" or higher

Required for B.S. degree in computer science.

A continuation of the material covered in CSCI 201. This course emphasizes object-oriented programming and a disciplined approach to program development. Topics include data abstraction, recursion, inheritance, polymorphism, linked data structures, stacks, and queues.

CSCI 205 *Introduction to Programming with Python* Three Credit Hours  
Prerequisites: None

This course is only for students who are NOT computer science majors.

This course teaches hands-on computer programming skills to students who are not computer science majors. This includes how to frame a problem as an algorithm, how to translate an algorithm to executable code, how to be sure the code does what you want. Programming assignments are drawn from a variety of domains and develop practical scripting and demonstration over theory.

CSCI 210 *Introduction to Information Systems* Three Credit Hours  
Prerequisites: None

This course introduces computers and information systems, including fundamental concepts of hardware and software as applied to computers in a business environment. Topics will include introductions to databases, web interfaces, networking, and operating systems, basic computer architecture, privacy and security, and computational thinking and problem solving. Students will work with spreadsheet, database, and other applications, and a simple programming language. The course assists those seeking a career as a computing professional, an understanding of the role of Information Systems in the business community, or introductory computing skills.

CSCI 216 *Introduction to Programming and Databases* Three Credit Hours

Prerequisite: Sophomore standing

Computer-oriented information systems. Program construction in Visual Basic with applications in the management and social sciences is presented in a microcomputer environment. Topics include data organization and collection, file organization, sort and search techniques, database construction, and manipulating data created in Microsoft Access using Visual Basic.

CSCI 217 *Web Resources and Design* Three Credit Hours  
Prerequisite: Sophomore standing

This course provides an introduction to web page design and the Internet. Topics include finding and evaluating resources, legal issues, web design, HTML, CSS, and dynamic HTML pages.

CSCI 223 *Data Structures and Algorithms* Three Credit Hours  
Prerequisites: CSCI 202 and MATH 206

Required for B.S. degree in computer science.

Formal specification and implementation of abstract data types and analysis of algorithms. Topics include list and set representation methods, sorting, trees and graphs. Data structures used include stacks, queues, binary trees, hash tables, priority queues, and search trees.

CSCI 227 *Principles and Practices of Cybersecurity* Three Credit Hours  
Prerequisites: None

This course is only for students who are not computer science majors.

This course will provide an introduction to concepts related to cybersecurity. Students will learn safe practices which can be deployed to secure computer systems. Students will gain an understanding of different tools which can be used to defend attacks on computer systems. Special emphasis will be given to

systems and applications that non-CS majors will likely to encounter in daily life. In addition to lecture classes, security lab exercises will be conducted to perform hands-on experiments on safe security practices.

CSCI 290 *Computer Science Topics* Three Credit Hours  
Prerequisites: None

A study of a particular aspect of computer science or a related area that is of interest to both computer science majors and other majors and assumes no prerequisites.

CSCI 305 *Computer Organization and Programming* Three Credit Hours

Prerequisite: CSCI 201 with a grade of “C” or higher; prerequisite or corequisite: Math 206

Required for B.S. degree in computer science.

An introduction to computer architecture and assembly language programming. Relationship of the conventional machine level of a modern computer system with its other levels. Topics are chosen from addressing; machine instructions; I/O; subroutines; parameters; recursion; stacks; interrupts; number systems and arithmetic; and the physical, digital, and the microprogramming levels.

CSCI 317 *Computer Networks and Internets* Three Credit Hours  
Prerequisites: CSCI 202 and CSCI 305, or ELEC 206 and ELEC 311

Required for B.S. degree in computer science.

An introduction to data communications and computer networking. Topics include LAN technologies, packet switching networks, internetworking of heterogeneous network technologies, internetworking protocol suites (with emphasis on TCP/IP), the client/server paradigm, the BSD Socket interface, network security, and important network applications.

CSCI 320 *Database Design* Three Credit Hours  
Prerequisite: CSCI 202 or CSCI 216

Required for B.S. degree in computer science.

An introduction to the logical and physical structures of computer database systems. Topics include data models, query languages, relational database design, and database constraints. Students will be required to complete a project involving database design and implementation.

CSCI 327 *Computer Security* Three Credit Hours  
Prerequisites: CSCI 201 and MATH 206, or ELEC 206 and ELEC 311

A survey of the principles and practices related to computer security emphasizing the problems of security associated with computer networks. Topics

include cryptography, privacy, authentication, access control and authorization, security policies, and legal and ethical issues. A significant component of the course is the investigation of attacks commonly used by computer criminals and strategies that can be used to thwart the attacks.

CSCI 355 *Programming Languages* Three Credit Hours  
Prerequisite: CSCI 223; prerequisite or corequisite: CSCI 305  
Required for B.S. degree in computer science.

Programming language concepts and constructs with emphasis on the runtime behavior of programs. Topics include imperative, functional and logic programming paradigms, language syntax and semantics, and global properties of programming languages including scope, parameter passing, storage allocation, and the binding time of constituents.

CSCI 365 *Object Oriented Programming Using C++* Three Credit Hours  
Prerequisite: CSCI 223

This course provides a solid foundation for object-oriented programming using the C++ programming language. It emphasizes the effective use of the advanced language features, presented in the context of modern software engineering themes of modularity, abstraction, information hiding, and reusability. Fundamental principles of object-oriented design and programming are stressed while covering the language details.

CSCI 370 *Developing Mobile Applications* Three Credit Hours  
Prerequisite: CSCI 202 or ELEC 206

This hands-on, project-oriented course explores the principles and tools involved in the design and construction of applications for mobile devices. Although a specific offering of the course might focus on one platform (e.g., smartphones running Google Android or Apples iOS), the basic concepts and experiences extend to other mobile devices. Topics include an overview of mobile application development, the platform application architecture, mobile application lifecycle, managing application resources, designing user interfaces, data storage options, integrating audio and video, location-based services, cross-platform development using a mobile device emulator, and porting applications to actual devices. In addition to several smaller programming assignments to provide experience and reinforce concepts, students will work in teams on a substantial programming project to design, develop, and deploy a mobile application.

CSCI 375 *Enterprise Java* Three Credit Hours  
Prerequisite: CSCI 223

A project-oriented course that introduces advanced Java technologies for building distributed enterprise and web applications. Topics include threads, networking, security, JDBC, servlets, and JavaServer Pages (JSP).

CSCI 399 *Junior Research Project* Three Credit Hours

Open only to junior computer science majors with a CSCI GPA of at least 3.0. It is required to have a written proposal accepted by the research advisor and the department head.

This course offers a junior computer science student the opportunity to complete research in an area of current interest and importance in computer science in collaboration with a research advisor. A formal paper is required in this course. Although it is a 300-level course, this course is not approved as a departmental elective. It may be used to fulfill a general elective.

CSCI 405 *Operating Systems* Three Credit Hours  
Prerequisites: CSCI 223 and CSCI 305

Required for B.S. degree in computer science.  
An introduction to the concepts of modern operating system design, the architectural features of modern computer systems, and a study of the implementations of these components in actual operating systems. Topics include data structures and algorithms to support process control, concurrency, and scheduling; memory management, including virtual memory architectures; and I/O and file management.

CSCI 407 *Computer Graphics* Three Credit Hours  
Prerequisites: CSCI 223 and MATH 240

An introduction to the fundamental principles of two- and three-dimensional computer graphics. Topics include graphics systems, transformations, clipping, animation, lighting, shading, color, and hidden surface removal. Graphics principles are applied and reinforced through the use of a modern graphics application programming interface (API) to implement a series of programming projects.

CSCI 412 *Compiler Design* Three Credit Hours  
Prerequisites: CSCI 223 and CSCI 305

This course explores the basic principles, algorithms, data structures, and tools involved in the design and construction of compilers. Topics include formal grammars, lexical analysis, parsing algorithms, semantic analysis, error recovery, code generation, and optimization. Each student will be required to complete a substantial programming project, the implementation of a compiler for a small programming language.

CSCI 420 *Software Engineering* Three Credit Hours

Prerequisite: CSCI 223

Required for B.S. degree in computer science.

An introduction to current techniques used in medium- and large-scale software development. Topics include requirements analysis, functional specification, systems design, implementation, testing, maintenance, project management, and professional ethics.

CSCI 421 *Software Engineering Practicum* Three Credit Hours

Prerequisite: CSCI 420

A team-based project class to apply software engineering practices in a realistic environment. The purpose of the course is to give students an opportunity to construct real-world software in a group using standard software engineering practices.

CSCI 427 *Advanced Cybersecurity* Three Credit Hours

Prerequisite: CSCI 327

This course will cover the techniques used to secure cybersystems. Topics covered will include security policies, computer security management and risk assessment, secured network protocols, software security issues, ethical and legal aspects of cybersecurity, and disaster recovery. Special emphasis will be given to designing, deploying, and managing complete secured cybersystems.

CSCI 455 *Artificial Intelligence* Three Credit Hours

Prerequisite: CSCI 223

A survey of artificial intelligence concepts, theory and practice. Topics include AI languages, knowledge representation, search strategies, logical and probabilistic reasoning, machine learning, natural language processing, expert systems, computer vision and AI robotics. Students will implement intelligent systems in software and/or hardware.

CSCI 490 *Advanced Topics in Computer Science* Three Credit Hours

Selected topics in computer science. The offering of this course will depend upon the interest of the students, the availability of an instructor, and approval of the department head. Since the content of the course may change, a student may repeat the course for credit with the consent of the department head.

CSCI 491 *Internship* Three Credit Hours

Open only to senior computer science majors with a CSCI GPA of at least 2.500.

This course gives senior students real-world work experience to complement the classroom education they have already received. Interns will learn about the variety of issues involved in developing, implementing, and managing computing resources in a real-world setting. Interns will spend ten to twelve hours per week in an area business working alongside an experienced computing professional or as part of a development team.

CSCI 495 *Senior Seminar in Computer Science* Three Credit Hours

Open only to senior computer science majors.

A variety of topics in computer science will be studied in areas ranging from theoretical computer science to social, professional, and ethical issues. Students will be required to make oral and written presentations.

CSCI 499 *Senior Research Project* Three Credit Hours

Open only to senior computer science majors with a CSCI GPA of at least 2.500.

A research project with a required formal paper. Recommended for students planning graduate work. Enrollment based upon a written proposal accepted by the instructor and approved by the department head.

## Swain Department of Nursing

Department Head: Joseph

Associate Professor: Ballestas, Joseph

Assistant Professors: Matutina, Pelletier

The Swain Department of Nursing is structured to prepare students for the role of a novice nurse in clinical practice. The department focuses on the caring and healing aspects of nursing and promotes the leadership role that nurses play in the care of individuals, families and communities. Courses progress from the care of healthy and/or chronically ill but stable individuals through the care of multiple individuals, those with complex health care needs and the health needs of populations. The critical role of quality and safety in healthcare is threaded throughout the curriculum.

### Research Opportunities

Students are encouraged to participate with faculty in research and evidence-based practice projects. As a developing science, the opportunities for research in nursing are numerous. Clinical practice partners are increasingly interested in scientific evidence to support the practice of nursing and students have an opportunity to support this need through evidence-based projects.

### Nursing Course Descriptions

NURS 200 *Introduction to Nursing* Two Credit Hours

Introduces the student to the nursing profession. This course provides an overview of nursing science to the student. The history of nursing is explored as well as theoretical frameworks that establish nursing as an independent discipline. Students are exposed to trends in healthcare that transform the role and responsibilities of the nurse in population health. The students will explore nursing education, evidence-based practice and its use in the healthcare arena as well as critical thinking and the nursing process.

Lecture: two hours

NURS 201 *Health Assessment* Four Credit Hours

Prerequisite: NURS 200

Introduces students to the methods of the assessment of the healthy adult, which includes obtaining the health history, physical examination skills, health promotion strategies, and clinical assessment tools while incorporating communication skills. Professional behaviors are learned and practiced.

Lecture: three hours; laboratory: two hours

NURS 202 *Fundamentals of Nursing* Four Credit Hours

Prerequisite: NURS 200

This course introduces the student to the nursing process, concept of critical thinking, evidence-based practice, and fundamental skills necessary for the provision of safe and effective nursing care. Professional behaviors are learned and practiced.

Lecture: three hours; laboratory: two hours

NURS 301 *Adult Health I* Three Credit Hours

Prerequisites: NURS 200, NURS 201, NURS 202, BIOL 340 and BIOL 341

This course will focus on critical thinking and the nursing process that addresses the specific needs of the hospitalized adult with medical and/or surgical disorder. The roles and responsibilities of the professional nurse will be explored. The student will apply knowledge gained through the Fundamentals, Pathophysiology, and Pharmacology course to the care of patients in the health care setting that promotes maintenance, promotion, and restoration of physiological/psychosocial function. The student will use an interprofessional approach to care incorporating principles of caring. This course uses knowledge gained in pathophysiology and pharmacology to address the nursing care of patients.

Lecture: three hours

NURS 302 *Adult Health II* Three Credit Hours

Prerequisites: NURS 301 and NURS 311

This course is designed to expand the knowledge of the student in the care of the hospitalized patient. Students apply critical thinking skills to the care of complex patients including patient and family teaching and planning across the continuum of care. The student uses knowledge gained in previous and concurrent courses and continues to build a professional knowledge base using evidence and analytical decision-making.

Lecture: three hours

NURS 303 *Health Policy* Three Credit Hours

This course introduces the student to issues in health policy and management within the United States. Four specific areas are covered: economics and financing, need and demand, politics/ethics/law, and quality and safety.

Lecture: three hours

NURS 306 *Healthcare Analytics* Two Credit Hours

This course is designed to give the student the basic knowledge needed to identify a problem related to the delivery of healthcare care, craft metrics for the objective assessment of the problem, collect and analyze the data and present information in a format that is usable for decision and policy makers. The student

explores existing measures of quality and safety and has an opportunity to apply basic data analytic strategies to these measures. The student also has an opportunity to identify a problem that is important to the practice setting and design and implement a measurement plan to address the problem.

NURS 311 *Adult Health I Clinical* Two Credit Hours

Prerequisites: NURS 200, BIOL 340 and BIOL 341

Corequisite: NURS 301

This clinical course is designed to explore the role of the professional nurse in the care of the hospitalized adults with specific medical/surgical conditions. The students will apply critical thinking skills and utilize the nursing process to provide care that addresses the needs of care of individuals to promote and restore physiological and psychosocial function. This encompasses individual and family teaching and planning across the continuum of care. The student will use knowledge gained in previous and concurrent courses and continues to build a professional knowledge base using evidence and analytical decision-making.

Laboratory/Clinical: six hours

NURS 312 *Adult Health II Clinical* Two Credit Hours

Prerequisites: NURS 301 and NURS 311

Corequisite: NURS 302

This clinical course is designed to expand the role of the professional nurse in the care of the complex hospitalized adults with specific medical/surgical conditions. The students will utilize critical thinking skills and the nursing process to provide care that addresses the needs of care of individuals to promote and restore physiological and psychosocial function. This encompasses individual and family teaching and planning across the continuum of care. The student will use knowledge gained in previous and concurrent courses and continues to build a professional knowledge base using evidence and analytical decision-making.

Laboratory/Clinical: six hours

NURS 401 *Maternal-Child Health* Five Credit Hours

Prerequisites: NURS 302 and NURS 312

This course is designed to assist the student in caring for women and families. This course covers the application of the nursing process with this population where there will be a focus on the childbearing phase of development. This includes the assessment of health needs related to normal and abnormal prenatal, intrapartum, and postpartum physiological changes and psychosocial needs. There will be a focus on pediatric health and illness from infancy to adolescence. An emphasis is placed on growth and development, health promotion, evidence-based practice, cultural variation and communication with children and families in the hospital and community settings.

Lecture: three hours; laboratory/clinical: six hours

NURS 402 *Community and Mental Health Nursing* Five Credit Hours

Prerequisites: NURS 302 and NURS 312

This is an integrated course that allows the student to understand population health as well as focus on behavioral issues. Students will focus on the dynamics of the client with behavioral issues within the larger population and the special needs associated with these clients. The student will employ a biopsychosocial approach to care. The student will also work with interprofessional groups on general population health and healthy communities and focus on assessing needs and promoting health of vulnerable individuals, groups, and communities. Family and community assessments will be performed utilizing public health concepts and principles.

Lecture: three hours; laboratory/clinical: six hours

NURS 403 *Evidence-Based Practice* Three Credit Hours

Prerequisites: NURS 302 and NURS 312

Students are exposed to the use of evidence in daily nursing practice. Research and performance improvement activities are learned. Students identify a problem statement and search the literature for supporting evidence. Basic data analysis skills are developed with the emphasis on the review and critique of published research with consideration of the application of research finding in the healthcare.

Lecture: three hours

NURS 404 *Nursing Leadership* Three Credit Hours

Prerequisites: NURS 302 and NURS 312

Students are exposed to effective leadership and management skills both within the health care profession as well as the community at large. Although bioethics is emphasized in each individual course, organizational ethics are presented to the student where the impact of legal, social, political and economic forces impact





optics, modern physics, and quantum mechanics. Starting in their freshman year, majors receive four years of undergraduate research experience. Research planning, participation, and presentation give students an opportunity to apply physics to a theoretical or experimental project or to the design and construction of apparatus.

Requirements for a Bachelor of Science degree in Physics also include four or five semesters of mathematics, four semesters each of English and foreign language, two semesters each of chemistry and history, and one semester of social science, as well as physical education and ROTC.

The program for physics majors retains flexibility in that a student who does not intend a profession in physics may, at the discretion of the department head, replace up to six credit hours of physics courses numbered above 300 with courses numbered above 300 in other science fields.

*II. Physics courses for majors in other fields.* As a service to other departments, and to meet the expectations of the college core curriculum, two separate basic physics sequences are individually designed to meet the requirements of specific groups of disciplines. All basic physics sequences have concomitant laboratories.

For the non-science majors and the biology majors, PHYS 203/253 and PHYS 204/254 (College Physics) constitute a survey sequence which emphasizes basic principles, as well as some exciting developments of modern technology.

For the students majoring in physical sciences, engineering, mathematics, and those preparing to be secondary school teachers in general science or physical science, PHYS 221/271 and PHYS 222/272 (Physics with Calculus) cover the fundamental principles of physics using more advanced mathematical tools. Additional, related topics (in mathematics and data analysis) are covered in two accompanying courses, PHYS 231 and PHYS 232 (Applications of Physics with Calculus).

PHYS 223/233/273 is a continuation of this sequence covering modern physics and research tools. Descriptive courses in elementary astronomy, ASTR 201 and ASTR 202; flight, PHYS 241; and meteorology, PHYS 243 are provided as electives.

A student may not use both PHYS 203/204 and PHYS 221/222 in meeting degree requirements, nor can a student take the 203/204 sequence after completing PHYS 221/222. However, should a student whose major does not require PHYS 221/222 complete PHYS 203/204 and then decide, for whatever reason, to complete the calculus-based sequence, PHYS 221 and 222 may satisfy General Elective requirements.

**Minor in Aerospace Science**  
(Please refer to p. 118)

**Minor in Applied Physics**  
(Please refer to p. 122)

### Physics Course Descriptions

PHYS 101 *Introduction to Physics* Three Credit Hours

Required of most freshmen majoring in physics.

An elementary course consisting of lectures on physics topics in their historical context from Galileo to the present. Covers fundamental techniques which are useful for learning this discipline and the conduction of research. Class notes and library reading will be required.

Lecture: three hours.

PHYS 203 and PHYS 204 *College Physics I and II* Three Credit Hours  
Each Semester

Prerequisite or corequisite for PHYS 203: PHYS 253

Prerequisites for PHYS 204: PHYS 203 and PHYS 253

Prerequisite or corequisite for PHYS 204: PHYS 254

This course presents physics in a manner suitable for students who do not have a strong background in mathematics. The course is designed primarily to help the non-scientist act in an informed way in today's technically oriented society. Topics covered in the two-semester course include mechanics, thermodynamics, electromagnetism, optics, and modern physics.

Lecture: three hours.

PHYS 221 and PHYS 222 *Physics with Calculus, I and II* Three Credit Hours  
Each Semester

Prerequisites for PHYS 221: MATH 131, MATH 107, or HONR 131 (May be taken concurrently with MATH 131 with permission of the head of the Department of Physics).

Prerequisite for PHYS 222: PHYS 221

Calculus-based introductory physics sequence designed to address the needs of students majoring in engineering and sciences. Kinematics, dynamics, electricity and magnetism, fluid statics and dynamics, thermodynamics and optics covered with no assumption of prior knowledge of physics.

Lecture: three hours.

PHYS 223 *Modern Physics* Three Credit Hours

Prerequisites: PHYS 221 and PHYS 222.

Required of all physics majors and minors; open to others as an elective. A continuation of the 221/222 physics sequence.

The course material covers a selection of topics from twentieth century physics. It progresses from Maxwell equations, propagation of electromagnetic waves, and the wave theory of light to the elements of special relativity, early quantum theory of radiation, then to the principles of quantum mechanics. It discusses the fundamental experiments in modern physics and the principal discoveries in the area of atomic, solid state, nuclear and elementary-particle physics.

Lecture: three hours

PHYS 231, PHYS 232     *Applications of Physics  
with Calculus, I and II*     One Credit Hour  
Each Semester

Corequisite or prerequisite for PHYS 231: PHYS 221

Corequisite or prerequisite for PHYS 232: PHYS 222

Supplementary introductory physics course designed to address the needs of students majoring in sciences and to prepare them for upper-division physics courses in mechanics, thermodynamics and electromagnetism, and the conduction of research.

Lecture: one hour.

PHYS 233     *Applications of Modern Physics*     One Credit Hour

Corequisite or prerequisite: PHYS 223.

Supplementary introductory physics course designed to address the needs of students majoring in sciences and to prepare them for upper-division physics courses in optics and quantum mechanics, and the conduction of research.

Lecture: one hour

PHYS 241     *The Physics of Flight*     Three Credit Hours

Prerequisites: PHYS 203 and 253 or PHYS 221 and 271

The flight of heavier than air vehicles is a wonder and a marvelous application of the principles of physics. This course is an introduction to the theory and application of aerodynamics, the study of air in motion. It provides an introduction to the physical principles of flight. The primary goals are to acquire an understanding of the basic principles, elementary models, and applications of aerodynamics as they apply to the study of heavier than air flight. Students who have a knowledge of algebra and of introductory mechanics as found in the first term of introductory physics have the prerequisites for the level at which this course will be taught. Students who want to understand how planes fly or who have a desire to be a pilot will find this course useful.

Lecture: two hours.

Laboratory: two hours.

PHYS 243     *Meteorology*     Three Credit Hours

Meteorology is the science of weather and climate. The material covered will include a study of the pressure, temperature, and density profiles of the atmosphere and the development of temperature, pressure, and moisture variances from the standard atmosphere. Winds, clouds, and temperature changes will be studied. Rain, snow, fog, storms, the jet stream, optical effects, and their application to flight will be addressed. There are no explicit prerequisites, but knowledge of basic algebra is needed.

Lecture: three hours.

PHYS 253 and PHYS 254     *Physics Laboratory for  
College Physics I and II*     One Credit Hour  
Each Semester

Prerequisite or corequisite for PHYS 253: PHYS 203

Prerequisite or corequisite for PHYS 254: PHYS 204

These laboratories are designed to correlate with the lecture material in PHYS 203 and PHYS 204, respectively. The experiments are designed to illustrate and emphasize the physical phenomena discussed in the corresponding lecture courses.

Laboratory reports stress competencies in writing and quantitative skills..

Laboratory: two hours.

PHYS 271, PHYS 272     *Laboratory for Physics with  
Calculus, I and II*     One Credit Hour  
Each Semester

Corequisite for PHYS 271: PHYS 221

Corequisite for PHYS 272: PHYS 222.

The laboratories parallel and supplement the lecture material in PHYS 221 and PHYS 222, respectively. The laboratories utilize modern measuring equipment including computer interface experiments, oscilloscopes, spectrosopes, etc. PHYS 271 concentrates on the fundamental concepts of physics and their application to the study of material properties. PHYS 272 concentrates on the procedures and techniques used in the experimental laboratory. Emphasis is placed on proper experimental technique, error analysis, and technical report writing. Experiments represent all the areas of physics included in the lecture: measurement, statics, linear and rotational dynamics, wave phenomena, sound, light, thermodynamics, electricity, magnetism and geometric optics.

Laboratory reports stress competencies in writing and quantitative skills.

Laboratory: two hours.

PHYS 273     *Modern Physics Laboratory*     One Credit Hour

Prerequisites: PHYS 271 and PHYS 272.

Required of all physics majors and minors; open to others with the permission of the instructor.

This lab concentrates on the role of the apparatus and technology in the experimental laboratory. Experiments include student versions of several fundamental experiments of modern physics. Students are also introduced to research which is conducted within the department.

Laboratory: two hours.

PHYS 301     *Biological Physics*     Three Credit Hours

Prerequisites: PHYS 222 and PHYS 272; MATH 107 or MATH 132

The applications of physics to the processes occurring in living systems. Among the topics to be discussed will be bioenergetics, radiation, biophysics, sensory biophysics, and bioelectricity. Attention also will be given to biomedical instrumentation.

Lecture: three hours.

- PHYS 307 *Electronic Instrumentation* Three Credit Hours  
 Prerequisites: PHYS 222 and PHYS 272; MATH 107 or MATH 132  
 Corequisite: PHYS 357  
 Required of all physics juniors.  
 Brief review of DC and AC circuits. Introductions to theory and applications of solid-state diodes, transistors and other semiconductors, amplifiers, waveform generators, operational amplifiers, transducers, and digital electronics.  
 Lecture: three hours.
- PHYS 308 *Optics* Three Credit Hours  
 Prerequisites: PHYS 222 and PHYS 272; MATH 107 or MATH 132  
 Required of all physics juniors.  
 Principles of geometrical and physical optics presented with attention to engineering applications. Topics covered include geometrical imaging, ray analysis, fiber optics, interferometry, thin film optical filters, polarization, Fourier optics, diffraction, and coherence theory. Matrix methods are applied to lens systems, thin films, and polarization.  
 Lecture: three hours.
- PHYS 315 and PHYS 316 *Analytical Mechanics* Three Credit Hours  
 Each Semester  
 Prerequisites: PHYS 222 and PHYS 272; MATH 231  
 Required of all physics juniors.  
 Statics and dynamics of rigid bodies, Lagrangian and Hamiltonian dynamics, collision kinematics, central-force motion, oscillating systems, introduction to relativity.  
 Lecture: three hours.
- PHYS 319 *Research Planning* Two Credit Hours  
 Required of all physics seniors.  
 An outstanding recent development in physics is chosen by one or more students and studied intensively. Also addressed is the role of ethics in scientific research.  
 Lecture: one hour  
 Laboratory: two hours.
- PHYS 320 *Mathematical Physics* Three Credit Hours  
 Prerequisites: PHYS 222 and PHYS 272; MATH 231  
 Required of all physics juniors.  
 Emphasis on mathematical methods of theoretical physics. Topics may include coordinate transformations, vector calculus techniques, special functions, definite integrals, approximations, numerical methods of data reduction, eigenvalue problems, boundary-value problems, representation theory, perturbation theory.  
 Lecture: three hours.

- PHYS 341 *Fundamentals of Aerodynamics* Three Credit Hours  
 Prerequisites: PHYS 222 and PHYS 272; MATH 107 or MATH 132  
 This course provides an introduction to the aerodynamics of heavier than air flight. It will be presented at the level suitable for technical majors who have taken at least the first two semesters of calculus and the first two semesters of calculus based introductory physics. Although not a prerequisite, PHYS 241 is a useful introduction to the concepts more deeply studied in this course. Introduction and fundamental principles and understanding of inviscid and viscous incompressible flow, and inviscid compressible around airfoils, through engine nozzles and diffusers will be covered.  
 Lecture: three hours.
- PHYS 343 *Applied Climatology* Three Credit Hours  
 Prerequisite: PHYS 243  
 Applied Climatology is a survey of the weather systems that contribute in the aggregate to world climates and their cumulative influence on Earth systems. Included are presentations from an historical perspective on the development of past climatic regimes, the transition to present-era climate, and the atmospheric dynamics involved in the global change process. Emphasis is placed on developing a broad-based working knowledge of the impacts present day climate and climate-trend changes have on human activities including aviation-related practices, procedures, and operations.  
 Lecture: three hours
- PHYS 357 *Electronic Instrumentation Laboratory* One Credit Hour  
 Corequisite or prerequisite: PHYS 307  
 Required of all physics majors.  
 Laboratory parallels and supplements lecture material in PHYS 307.  
 Laboratory: two hours.
- PHYS 358 *Optics Laboratory* One Credit Hour  
 Corequisite or prerequisite: PHYS 308  
 Required of all physics majors.  
 Laboratory parallels and supplements lecture material in PHYS 308.  
 Laboratory: two hours.
- PHYS 391 *Fluids Laboratory* Two Credit Hours  
 Prerequisite: PHYS 241  
 Can be used toward the Aerospace Science Minor.  
 Fluid dynamics is the study of fluids in motion. This laboratory course concentrates on the role of the wind tunnel and computational fluid dynamics (CFD) in the study of fluid flow around or through scaled models.  
 Laboratory: four hours.

PHYS 393 *Flight Simulation* One Credit Hour

Prerequisite: PHYS 241

Can be used toward the Aerospace Science Minor.

Fluid dynamics is the study of fluids in motion. The effect of aerodynamic flow on the control and stability of an aircraft will be studied using the physics engines (aerodynamics calculation model) which powers flight simulation software packages such as Flight Simulator or X-Plane. Effects studied in PHYS 241, The Physics of Flight, will be observed using flight simulators.

Laboratory: two hours.

PHYS 403 and *Electrodynamics I and II* Three Credit Hours  
PHYS 404 Each Semester

Prerequisites: PHYS 222; MATH 231

Prerequisite or corequisite: PHYS 320

Required of all physics seniors.

The electrostatic field and its effect on matter, the properties of magnetic fields and magnetic materials, electromagnetic effects, vector potentials, displacement currents, Maxwell's equations, Lorentz force on particles, periodic currents.

Lecture: three hours.

PHYS 405 and *Quantum Mechanics* Three Credit Hours  
PHYS 406 Each Semester

Prerequisites: PHYS 223, PHYS 308, PHYS 316

Prerequisite or corequisite: PHYS 320

Required of all physics seniors.

An introductory course in quantum mechanics with emphasis on both physical principles and mathematical techniques. Stress is placed on understanding how quantum mechanics is used in explaining the behavior of physical systems.

Lecture: three hours.

PHYS 409 *Intermediate Optics* Three Credit Hours

Corequisite or prerequisites: PHYS 308 and MATH 234

This course is a continuation of Optics PHYS 308. It develops the Fourier analysis approach to physical optics. Topics covered include the optical transfer function, the wave theory of aberrations, spatial filtering, holography and applications, fiber optics, and nonlinear optics.

Lecture: three hours.

PHYS 410 *Thermodynamics* Three Credit Hours

Prerequisites: PHYS 222 and PHYS 272; MATH 107 or MATH 132

Required of all physics seniors.

Principles of thermodynamics presented with attention to engineering, chemical, and biological applications. First and Second Laws of Thermodynamics, especially as applied to closed hydrostatic systems and open steady-flow systems. Concepts of internal energy, heat flow, enthalpy, and entropy. Perfect gas processes. Carnot cycle for heat engines, heat pumps, refrigerators. Power output; mass flow equations; quality factor for mixed systems.

Lecture: three hours.

PHYS 415 *Special Topics in Physics* Three Credit Hours

Prerequisites: Permission of instructor.

Topics may vary by semester according to student interest and availability of instructor. The subject for a semester will be chosen from such topics as space physics, special relativity, fluid dynamics, and solid state physics.

Lecture: three hours.

PHYS 416 *Advanced Topics in Physics* Three Credit Hours

Prerequisites: Permission of instructor.

Similar to PHYS 415. The subject for a semester will be chosen from such advanced topics as group theory in quantum mechanics, magnetic resonance, propulsion, and plasma physics.

Lecture: three hours.

PHYS 420 *Research Participation* Three Credit Hours

Prerequisite: PHYS 319

Required of all physics seniors.

The project started in PHYS 319 (Research Planning) is completed to include a written thesis and an oral presentation.

Lecture: one hour.

Laboratory: four hours.

PHYS 421 *Research Presentation* Two Credit Hours

Using the research started in PHYS 319 and completed in PHYS 420, a dissertation will be written and a seminar will be presented before the faculty and student body of the department. Writing a paper for scientific journals, writing a dissertation for graduate school requirements, and presenting a paper at a scientific meeting will be emphasized.

Lecture: one hour

Laboratory: two hours.

PHYS 441 *Fluids Dynamics* Three Credit Hours  
 Prerequisite: PHYS 341  
 Can be used toward the Aerospace Science Minor.  
 Fluid dynamics is the study of fluids in motion, both gases and liquids. This course develops the integral, differential, and computational approaches to calculating the effects which fluids have as they pass over or through an object.  
 Lecture: three hours.

PHYS 451 *Advanced Laboratory Physics* Two Credit Hours  
 Required of all physics seniors.  
 Experiments selected from famous fundamental measurements.  
 Laboratory: four hours.

### Astronomy Course Descriptions

ASTR 201 *Introduction to Astronomy:  
Sun and Planets* Three Credit Hours  
 A descriptive introduction to the universe, our sun and its solar system, the Earth and the other planets, asteroids, and comets. Practical observational astronomy. Planetary discoveries made by space craft. Life in the universe.  
 Lecture: three hours.

ASTR 202 *Introduction to Astronomy:  
Stars and Galaxies* Three Credit Hours  
 The universe outside the solar system, the sun as a typical star, the Milky Way and other galaxies, pulsars, quasars, and black holes are studied.  
 Lecture: three hours.

ASTR 240 *Astrobiology: The Search for Life  
in the Universe* Three Credit Hours  
 Prerequisites: PHYS 203 and 253 or PHYS 221 and 271  
 We will begin our study of the new science of astrobiology with general topics such as current theories of the rise of habitability and life on Earth, distribution of complex organic molecules in the universe and definition of habitability as regards other planets and star systems. We will then move into specialized topics relating to current research themes in astrobiology: potentially habitable zones in the Solar System -- oceans of the Jovian satellites, potentially wet regions of Mars, Enceladus; other places of interest, such as Venus and Titan; current limits of life on Earth -- Earth extremophiles, including Antarctic cryptoendoliths as a case study; potentially habitable zones in other star systems; the search for extrasolar planets.  
 Lecture: three hours.

ASTR 412 *Stellar and Galactic Astrophysics* Three Credit Hours  
 Prerequisites: PHYS 221 and MATH 132  
 The structures, atmospheres, dynamics, and evolutions of stars; the techniques of stellar abundance analysis and spectral classification; the reduction, eigenvalue problems, boundary-value problems, representation theory, and perturbation theory.  
 Lecture: three hours.

## Department of Leadership Studies

Department Head: Rivers James  
Professors: Connor, Rivers James  
Associate Professor: B. Dean, J. Smith

The mission of the Department of Leadership Studies is to enhance the ability of students from any academic background to perform effectively as principled leaders in their present or future leadership roles and organizational contexts. The program utilizes core leadership courses and interdisciplinary courses to engage students in broad learning about leadership in applied contexts. At various points, the interdisciplinary curriculum allows students to tailor the focus of their study toward individual and career interests.

The Department oversees all credit-bearing academic leadership courses (LDRS-prefix), including the Sophomore Seminar in Principled Leadership, required of all cadets. A minor in Leadership Studies addresses learning, scholarship, and critical thinking about leadership from various analytical perspectives and, as a result, gives students a broad understanding of the nature of effective, ethical leadership. This minor complements the “leadership laboratory” aspect of cadet life at The Citadel. All upper level Leadership Studies courses serve as ROTC fulfillment classes for Juniors and Seniors.

### Minor in Leadership Studies (Please refer to p. 147)

#### Leadership Course Descriptions

**LDRS 201**     *Sophomore Seminar in Principled Leadership*     One Credit Hour  
Required of all second-year cadets, this course incorporates The Citadel core values of honor, duty, and respect as those values constitute principled leadership. The course also assists cadets in the process of transitioning from the freshman year to the sophomore year and enables them to reflect upon their experiences of the Citadel’s fourth-class system as they learn more about effective, ethical leadership. In addition, the course includes service as a component of principled leadership through a service learning experience. This course is a graded, one-hour course. A student must have permission of the Associate Provost for Academic Affairs to withdraw from LDRS 201. Students must complete LDRS 201 prior to enrolling in LDRS 371.

**LDRS 320**     *Leadership Communications*     Three Credit Hours  
Leadership Communications will focus on an understanding of effective leader communications based on analysis of speeches and writings. This course requires critical thinking to analyze and develop leader intent and messages. The course will also examine multimedia tools available to leaders and will address opportunities and challenges of using technology in achieving effective leadership.

**LDRS 371**     *Leadership in Organizations*     Three Credit Hours  
Prerequisite: LDRS 201  
This course considers various theories of leadership and their role in critical organizational issues, including leader effectiveness, ethics, power, influence, politics, teamwork, motivation, creativity, innovation, communication, conflict, strategy, diversity, and leadership development. The course uses case studies and experiential components to provide hands-on learning and practice opportunities in business, political, and social justice contexts. This course is identical to BADM 371 and is cross-listed.

**LDRS 401**     *Senior Leadership Seminar/Project*     Three Credit Hours  
Prerequisite: Enrollment in the minor in Leadership Studies or instructor permission.  
Candidates for the Leadership Studies minor will work closely with the professor on an independent study project dealing with a leadership issue or challenge and with the application of principled leadership values. The student will write a case study or research project of approximately 20-25 pages discussing a specific leadership issue or problem. The presentation of the results will be an integral part of this exercise. Students will present in class and, at the discretion of the professor, present in other forums, such as Citadel faculty/staff meetings, symposia, or professional conferences.

**LDRS 433**     *Special Topics in Leadership*     Three Credit Hours  
Selected topics or problems in the general area of leadership; offered periodically as the special interests of faculty and students permit.

## Department of Aerospace Studies

Department Head: Will

Professor: Will

Assistant Professors: Batts, Brabham, Campano, Figlewski, Kretser, Lee, Megee, Yearage

Citadel Air Force ROTC courses feature a wide variety of instruction and training opportunities. During the freshman and sophomore years, the curriculum provides students with an understanding of air power's past, present, and future roles in world affairs, as well as its relation to national defense. These courses cover the doctrine, mission, and organization of the United States Air Force and examine the development of air and space power from its inception to its uses today in contingency operations.

During the junior and senior years, the Air Force ROTC program instruction focuses on leadership and ethics principles, global studies, and prepares cadets for active duty entry. Included are communicative skills, professional responsibility, the military justice system, functions and practices of leadership and management principles, and problem solving.

### Air Force Course Descriptions

AERO 101     *Heritage and Values of the U.S. Air Force*     One Credit Hour  
(Fall Semester—Fourth Class Year)

Heritage and Values of the US Air Force and its follow-on is course providing the student with an introductory survey of the United States Air Force (USAF) and the Air Force Reserve Officer Training Corps (AFROTC). In the first semester, the course begins with an introduction to AFROTC's mission, the Air Force Core Values, the profession of arms, customs and courtesies as well as dress and appearance standards expected of all Air Force officers. It continues with discussion on Air Force speaking and writing overviews and career field briefings. The course concludes with an overview of service benefits and an introduction to team building and leadership. Case studies and video scenarios are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. Communication skills are further developed through oral and written presentations. Leadership

Laboratory is mandatory for AF ROTC contract/pursuing cadets and compliments this course by providing cadets with followership experiences.

Lecture: one hour

Lab: two hours (contract or cadets pursuing contracts only)

AERO 102     *Heritage and Values of the US Air Force*     One Credit Hour  
(Spring Semester—Fourth Class Year)

Heritage and Values of the US Air Force is a survey course covering an introduction to the evolution of airpower and the basic characteristics of war. The course offers the student an opportunity to learn about the principles of war and tenets of airpower as well as the general construct of the Department of the Air Force. Students are introduced to Air Force Major Commands, Air Force guidelines on social media as well as knowing the distinct functions and various levels of doctrine as they relate to Air Force operations. Case studies and video scenarios are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. Communication skills are further developed through oral and written presentations. Leadership Laboratory is mandatory for AFROTC contract/pursuing cadets and compliments this course by providing cadets with followership experiences.

Lecture: one hour

Lab: two hours (contract or cadets pursuing contracts only)

AERO 201     *Team and Leadership Fundamentals*     One Credit Hour  
(Fall Semester—Third Class Year)

*Team and Leadership Fundamentals is a survey course focused on laying the foundation for strong teams and sound leadership. The topics include skills that will allow cadets to improve their own leadership on a personal level, as well as within a team, starting with classes on the comprehension of how personality types can influence mission accomplishment. Classes on effective listening, followership, problem solving, motivation, standards and accountability as well as full-range leadership will aid the student in preparation for their field training experience. Case studies and video scenarios are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. Communication skills are further developed through oral and written presentations. Leadership Laboratory is mandatory for AF ROTC contract/pursuing cadets and complements this course by providing cadets not only followership and initial leadership opportunities, but also initial preparation for Field Training.*

Lecture: one hour

Lab: two hours (contract or cadets pursuing contracts only)



AERO 202 *Team and Leadership Fundamentals* One Credit Hour  
(Spring Semester—Third Class Year)

Team and Leadership Fundamentals is a survey course focused on building teams, managing conflict, human relations and comprehensive Airman Fitness as it relates to stress management. The purpose is to instill a leader's mindset and to motivate students to transition from AFROTC cadet to AFROTC officer candidate. Case studies and video scenarios are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. Communication skills are further developed through oral and written presentations. Leadership Laboratory is mandatory for AFROTC contract/pursuing cadets and complements this course by providing cadets not only followership and initial leadership opportunities, but also initial preparation for Field Training.

Lecture: one hour

Lab: two hours (contract or cadets pursuing contracts)

Field Training approximately 30 days (typically summer after sophomore year)

AERO 301 *Leading People and Effective Communication* Three Credit Hours  
(Fall Semester—Second Class Year)

Leading People and Effective Communication, a course for contracted cadets only, is a study of leadership and management fundamentals. Cadets will study decision making, change management, as well as learn Air Force writing techniques. The class will explore informative briefing requirements in addition to learning about the effective supervision of Airmen. Classes will receive perspectives from Noncommissioned Officers, and discuss topics such as equal opportunity, leading and thriving with diversity, cross-cultural competence, and cultural visual expeditionary skills training. Airmanship, Air Force heritage and cyber security will round out first semester coverage. Case studies video scenarios are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. A mandatory Leadership Laboratory compliments this course by providing advanced leadership experience in officer type activities, giving students the opportunity to apply the leadership and management principles of this course. Fall Semester requirements also include individual communications assignments. Students are required to research leadership topics and provide oral and written presentations in the Air Force formats.

AERO 302 *Leading People and Effective Communication* Three Credit Hours  
(Spring Semester—Second Class Year)

Leading People and Effective Communication, a course for contracted cadets only, is a continued in-depth study of leadership and management. Students will begin to hone their negotiation skills as well as learn the enlisted force structure to include feedback and mentoring processes, evaluation concepts, and professionalism. Leadership effectiveness, creating a vision, organizational climate and public affairs are also covered. Classes will be introduced to the Air Operations Center as well as Air Force Command and Control concepts. Air Force heritage and airpower theory is explored. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. Spring Semester requirements also include individual communications assignments. Students are required to research leadership topics and provide oral and written presentations in Air Force formats. A mandatory Leadership Laboratory complements this course.

Lecture: three hours

Lab: two hours (contract or cadets pursuing contracts only)

AERO 401 *National Security Affairs and Preparation for Active Duty I* Three Credit Hours  
(Fall Semester—First Class Year)

This course covers the development of U.S. national security and military policies. The course begins with a discussion of the constitutional relationship between the Executive and Legislative Branches of government and the military. Other topics include Air Force doctrine; joint operations; terrorism and force protection; regional studies; and the Aerospace Expeditionary Force. Leadership Laboratory is mandatory for AFROTC contract cadets and complements this course by providing cadets with leadership and followership experiences as well as preparing the individual for active duty.

Lecture: three hours

Lab: two hours (contract or cadets pursuing contracts)

AERO 402 *National Security Affairs and Preparation for Active Duty II* Three Credit Hours  
(Spring Semester—First Class Year)

This course expands on the concepts introduced in AERO 401, with a continued emphasis on regional studies and the impact that international affairs may have on the U.S. National Security Policy. In addition, special topics are presented to prepare contract cadets for transition to active duty in the Air Force. Leadership Laboratory is mandatory for AFROTC contract cadets and complements this course by providing cadets with leadership and followership experiences as well as preparing the individual for active duty.

Lecture: three hours

Lab: two hours (contract or cadets pursuing contracts)

AERO 450 *Air Force Leadership Laboratory* Zero Credit Hours  
(Fall & Spring Semesters—All Class Years)

This lab is designed to give insight into the Air Force and give leadership opportunities to cadets through a variety of experiences. Cadets are expected to perform a multitude of tasks in both the followership and leadership roles. Some topics include Air Force customs and courtesies, military commands, LEAD Training prep, preparation for active duty, and Air Force opportunities. Additionally, cadets gain leadership experiences in planning, organizing, and executing cadet-training activities; preparing and presenting briefings and other oral and written communications. This lab is graded on a **PASS or FAIL** basis and must be taken each semester by cadets on AF contract or those desiring to be on an AF contract.

Lecture: two hours

## Department of Military Science

Department Head: Cyrulik

Professor: Cyrulik

Assistant Professors: Hill, Jones, Marvel

Instructors: Austin, Fontenet, McCullough, Ragusa

The Army ROTC program of instruction at The Citadel is geared toward teaching “hands-on skills” that are required of a new Second Lieutenant in the active Army, Army Reserve, or Army National Guard. Instruction at all levels centers around leadership. The program includes instruction in basic combat techniques, physical training, weapons, general military subjects, tactics, and communication skills. Selected cadets have the opportunities to attend military schools and unique training opportunities. In addition to the schooling opportunities, cadets will have the opportunity to serve as “Third Lieutenants” with an active Army unit for two to four weeks in the Cadet Troop Leadership Training (CTLT) Program. The Citadel also has one of the largest Simultaneous Membership Programs (SMP) in the nation. This program is a volunteer officer training program which allows Army National Guard and Army Reserve enlisted members to also participate in the Advanced ROTC course leading to a commission in one of the reserve components.

Military Science is a four-year program of instruction, divided into a two-year Basic Course and a two-year Advanced Course. The first year (Military Science I) addresses the role of the individual soldier through instruction and practical training in the areas of physical training, marksmanship, first aid, map reading, U.S. weapons, and leadership. The second year (Military Science II) builds upon the first, through the development of more advanced individual skills such as land navigation, basic individual combat techniques, and small unit tactics and leadership.

Students transferring into Army ROTC from another service and seeking a commission, or students at cross-town universities with a ROTC cross-enrollment agreement, that have not taken Army ROTC Basic course classes (MLTY 101 to 202) will attend the Basic Camp at Fort Knox, Kentucky prior to enrollment in the Army ROTC Advance Course. Basic Camp is a four week basic instruction program designed to accommodate alternate entry into the Army ROTC Advance Course through hands-on training and granting of Basic Course credit upon successful completion.

The Army ROTC Advance Course is restricted to students contracted to commission in the Army and to students pursuing a contract to commission. Exceptions are granted on a case by case basis by the Professor of Military Science. Students not seeking a commission will take ROTC fulfillment courses offered by the college.

The first year of the Advanced Course (Military Science III) is primarily designed to train cadets to attend Advanced Camp, which takes place between their junior and senior years. The curriculum focuses on instruction and practical training exercises in advanced land navigation and map reading, individual military skills, principles and techniques of squad and platoon operations, the principles of organizational leadership, communications, fire support, U.S. Army weapons systems, and rigorous physical training. At the conclusion of their junior year, contracted cadets will attend Advanced Camp at Ft. Knox, Kentucky. Advanced Camp is based upon performance-oriented training and continuous leadership potential evaluation. Each cadet's Advanced Camp evaluation is a principal determinate in branch selection and in being chosen for Active or Reserve Forces Duty.

The final year of the Advanced Course (Military Science IV) consists of instruction in solving contemporary leadership problems, principles of military justice, techniques of military writing, evolution of current tactics, precommissioning seminars, and military professionalism and ethics. The beginning of the senior year is the final opportunity for Citadel cadets to apply for a contract and seek an Army commission.

Cadets seeking commissions as Second Lieutenants in the United States Army are required to successfully complete one of ten designated military history courses, Advanced Camp, and ROTC Advanced Courses training. Cadets are highly encouraged to take courses in mathematical reasoning (Algebra, Trigonometry, Calculus, and Statistics), computer science, natural science (Biology, Geology, Chemistry or Physics), human behavior, management, and national security affairs to better prepare themselves for their futures as Army officers. Cadets enrolling in Military Science are provided a consolidated list of all academic courses offered by The Citadel that satisfy the professional military education requirement.

### Army Course Descriptions

MLTY 101 *Leadership and Personal Development* One Credit Hour

MLTY 101 introduces you to the personal challenges and competencies that are critical for effective leadership and communication. You will learn how the personal development of life skills such as cultural understanding, goal setting, time management, stress management, and comprehensive fitness relate to leadership, officership, and the Army profession. As you become further acquainted

with MLTY 101, you will learn the structure of the ROTC Basic Course program consisting of MLTY 101, 102, 201, 202, Fall and Spring Leadership Labs, and Basic Camp. Scholarship cadets will register for MLTY 151, Army lab in conjunction with their Army course. **Only cadets classified as 4<sup>th</sup>-class cadets are authorized to enroll in this course.**

MLTY 102 *Foundations in Leadership* One Credit Hour

MLTY 102 introduces you to the Army tactical concepts such as map reading, land navigation and general operations. It also focuses on the Army Leadership Model and explores these dimensions in detail. As you become further acquainted with MLTY 102, you will learn the structure of the ROTC Basic Course program consisting of MLTY 101, 102, 201, 202, Fall and Spring Leadership Labs, and Basic Camp. Scholarship, contracted, and seriously pursuing cadets will register for MLTY 152, Army lab in conjunction with their Army course. **Only cadets classified as 4<sup>th</sup>-class cadets are authorized to enroll in this course.**

MLTY 151/152/251/252/351/352/451/452

*Army Contract Lab* Zero Credit Hours

This is the laboratory course which is required for all scholarship and contracted cadets; additionally, it is open for cadets who are actively pursuing an Army contract. This laboratory includes two Training Exercises a semester; during which cadets will learn leadership, small unit tactics, team building skills, and essential Skill Level One tasks that all soldiers are capable of doing. All training that occurs in these labs is received and disseminated through the Army's Troop Leading Procedures and Orders process allowing cadets to refine necessary skills of a Second Lieutenant. All courses are Pass/Fail.

MLTY 201 *Leadership and Decision Making* Two Credit Hours

MLTY 201 explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the Army leadership framework. Aspects of personal motivation and team building are practiced in planning, executing, and assessing team exercises. The focus continues to build on developing knowledge of the leadership attributes and core leader competencies through the understanding of Army rank, structure, and duties as well as broadening knowledge of land navigation and squad tactics. Case studies will provide a tangible context for learning the Soldier's Creed and Warrior Ethos. Scholarship, contracted, and seriously pursuing contract cadets will register for MLTY 251, the Army Contract Lab, in conjunction with their Army course. **Only cadets classified as 3<sup>rd</sup>-class cadets are authorized to enroll in this course.**

MLTY 202 *Army Doctrine and Team Development* Two Credit Hours

MLTY 202 examines the challenges of leading tactical teams in the operational environment. The course highlights dimensions of doctrine, ethics and leader development. Further study of the theoretical basis of the Army Leadership Requirements Model explores the dynamics of adaptive leadership in the context of military operations. MLTY 202 prepares cadets for MLTY 301. Cadets develop greater self-awareness as they assess their own leadership styles and practice communication and team building skills. Ethical and Culture Case studies give insight into the importance and practice of teamwork and decision making in real-world scenarios. Scholarship, contracted, and seriously pursuing cadets will register for MLTY 252, the Army Contract Lab, in conjunction with their Army course. **Only cadets classified as 3<sup>rd</sup>-class cadets are authorized to enroll in this course.**

MLTY 301 *Adaptive Team Leadership* Three Credit Hours

Prerequisites: MLTY 101, MLTY 102, MLTY 201, and MLTY 202 or completion of Basic Camp or US Army Basic Training with an approved waiver from the PMS.

The Advanced Course is designed to build off basic programs (MLTY 101, 102, 201, and 202) being progressive and sequential. The course is driven by the professional competence in Army doctrine and leadership principles taught through the Adult Learning Model. This includes introduction to squad/section tactical operations using troop leading procedures and battle drills to achieve the assigned mission within the commander's intent. Cadets enrolling in MLTY 301 are required to enroll in MLTY 351; the Army Contract Lab and cadets will attend Physical Training. **Only cadets classified as 2<sup>nd</sup>-class cadets are authorized to enroll in this course.**

MLTY 302 *Leadership Under Fire* Three Credit Hours

Prerequisite: MLTY 301

The Advanced Course will balance adaptability and professional competence building on the lessons introduced in MLTY 301. Various platoon operations are stressed in order to familiarize the cadet with materials that they can expect to execute during CST. Adaptability concepts introduced include analysis of complex problems, creating solutions that exhibit agile and adaptive thinking, analysis of the situational environment and formulation of solutions to tactical and organizational problems. Cadets enrolling in MLTY 302 are required to enroll in MLTY 352; the Army Contract Lab and cadets will attend Physical Training. **Only cadets classified as 2<sup>nd</sup>-class cadets are authorized to enroll in this course.**

MLTY 401 *Command and the Army Profession*

Three Credit Hours

Prerequisite: MLTY 302, completion of Advance Camp or with PMS approval.

MLTY 401 explores the dynamics of leading in the complex situations of current military operations. You will examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. You also explore aspects of interacting with non-government organizations, civilians on the battlefield; the decision making processes and host nation support the complex ethical demands of serving as a commissioned officer in the United States Army. Scholarship and contracted cadets will register for MLTY 451, Army Contract Lab.

MLTY 402 *Mission Command and the Company Grade Officer* Three Credit Hours

Prerequisite: MLTY 401, completion of Advance Camp or with PMS approval.

MLTY 402 explores the dynamics of leading in the complex situations during Unified Land Operations, examines the Art of Command, how to properly communicate with your NCOs and Soldiers, and Developing Others (counseling). Additionally, cadets will develop an understanding of cultures through Cultural Awareness and Cultural Property Protection (CPP), and how ethical decisions impact personnel and the unit mission. The course places significant emphasis on preparing you for BOLC B and your first unit of assignment. It uses mission command case studies and scenarios to prepare you to face the complex ethical demands of serving as a commissioned officer in the United States Army. Scholarship and contracted cadets will register for MLTY 452, Army Contract Lab.

## Department of Naval Science

Department Head: Dunne

Professor: Dunne

Associate Professor: Marks

Assistant Navy Professors: Bartek, Bottler, Jones, Mowrey, Scappe, Walgrave

Assistant Marine Corps Professors: Moreno, Parker

Instructor: Hart

The Department of Naval Science course of instruction is designed to provide students with the basic professional knowledge and leadership skills needed to become Navy and Marine Corps officers. In the initial three semesters, all students receive an introduction to the essential aspects of the Navy and Marine Corps warfighting team, the history of seapower and maritime affairs, and naval leadership and management.

Students receive their subsequent instruction in either Navy or Marine Corps service specific courses. Navy option students study naval engineering, combat systems, navigation, and naval operations and seamanship. Marine option students study Marine Corps organization and weapon systems, the historical development of warfare, and amphibious operations. Both options conclude with practical leadership training designed as final preparation for assuming the responsibilities of a junior officer in the Navy or Marine Corps.

An added value of being a member of The Citadel NROTC Unit is the opportunity to participate in a variety of quality off-campus Field Training Exercises (FTXs). These opportunities are enhanced by the close proximity, and eager support, of several local DoD organizations and installations. For Navy option midshipmen, FTXs include shipboard training, aviation operations, and joint operations with local Coast Guard assets. For Marine option midshipmen, FTXs consist of field orientation and tactical exercises conducted aboard nearby military installations.

More information about the Department of Naval Science may be found at [www.citadel.edu/nrotc](http://www.citadel.edu/nrotc).

### Sequence of Naval Science Courses

#### Fourth Class Year

All Naval ROTC Cadets

NAVL 101	Introduction to Naval Science
NAVL 102	Seapower and Maritime Affairs
NAVL 450	Navy Training Lab
NAVL 451	Marine Training Lab

#### Third Class Year

Candidates for U.S. Navy commissions	
NAVL 201	Naval Leadership and Management
NAVL 210/220	Navigation/Navigation Laboratory
NAVL 450	Navy Training Lab

Candidates for U.S. Marine Corps commissions	
NAVL 201	Naval Leadership and Management
NAVL 202	Marine Corps Concepts and Weapon Systems
NAVL 451	Marine Training Lab

#### Second Class Year

Candidates for U.S. Navy commissions	
NAVL 310	Naval Ship Systems I (Engineering)
NAVL 311	Naval Ship Systems II (Weapons)
NAVL 450	Navy Training Lab

Candidates for U.S. Marine Corps commissions	
NAVL 303	Evolution of Warfare I
NAVL 304	Evolution of Warfare II
NAVL 451	Marine Training Lab

#### First Class Year

Candidates for U.S. Navy commissions	
NAVL 410/420	Naval Operations and Seamanship/Laboratory
NAVL 403	Naval Leadership and Ethics
NAVL 450	Navy Training Lab
NAVL 452	Naval Senior Lab

Candidates for U.S. Marine Corps commissions	
NAVL 402	Fundamentals of Maneuver Warfare
NAVL 403	Naval Leadership and Ethics
NAVL 451	Marine Training Lab
NAVL 452	Naval Senior Lab

### Naval Science Course Descriptions

NAVL 101     *Introduction to Naval Science*     One Credit Hour

General introduction to the U.S. Navy and U.S. Marine Corps. Emphasizes organizational structure, warfare components, and assigned roles/missions of USN/USMC. Covers all aspects of naval service from its relative position within DoD to the specific warfare communities/career paths. Also includes basic elements of leadership and Navy Core Values. Designed to give the student initial exposure to many elements of naval culture. Also provides conceptual framework/working vocabulary for the student to use on summer cruise. (Navy and Marine Corps faculty)

NAVL 102 *Seapower and Maritime Affairs* One Credit Hour

A study of the U.S. Navy and the influence of seapower upon history. Incorporates both a historical and political science process to explore the major events, attitudes, personalities, and circumstances that have imbued the U.S. Navy with its proud history and rich tradition. Deals with issues of national imperatives in peacetime, as well as war; varying maritime philosophies that were interpreted into naval strategies/doctrines; budgetary concerns which shaped force realities; and the pursuit of American diplomatic objectives. Concludes with a discussion of the Navy's strategic and structural changes at the end of the Cold War and its new focus, mission, and strategy in the post-9/11 world. (Navy faculty)

NAVL 201 *Naval Leadership and Management* Two Credit Hours

Introduces the student to many of the fundamental concepts of leading Sailors and Marines, which will be expanded upon during the continuum of leadership development throughout NROTC. Develops the elements of leadership vital to the effectiveness of Navy/Marine Corps officers by reviewing the theories and parameters of leadership and management within and outside of the naval service and progressing through values development, interpersonal skills, management skills, and application theory. Practical applications are explored through the use of experiential exercises, readings, case studies, and laboratory discussions. (Navy faculty)

NAVL 202 *Marine Corps Concepts and Weapon Systems* Two Credit Hours

This course introduces the student to the fundamental concepts of the Marine Corps in relation to its structure and organization, as well as the common weapon systems of the service and how they relate to its warfighting doctrine. This course is meant to help prepare the Marine option student for further courses in *Evolution of Warfare*, *Amphibious Warfare*, and *Leadership and Ethics*. This course also includes history and traditions of the Marine Corps relevant to the future Marine Corps officer. (Marine Corps faculty)

NAVL 210 *Navigation* Three Credit Hours

In-depth study of the theory, principles, procedures, and application of plotting, piloting, and electronic navigation, as well as an introduction to maneuvering boards. Students learn piloting techniques, the use of charts, the use of visual and electronic aids, and the theory of operation of both magnetic and gyrocompass. Students develop practical skills in plotting and electronic navigation. Other topics include tides, currents, effects of wind/weather, voyage planning, and an application and introduction to the international/inland rules of navigation. The course is supplemented with a review/analysis of case studies involving moral/ethical/leadership issues pertaining to the concepts listed above. (Navy faculty)

**Students must be concurrently enrolled in NAVL 220 (Navigation Laboratory).**

NAVL 220 *Navigation Laboratory* 0 Credit Hours

Laboratory exercise classroom session designed to parallel the lecture content of NAVL 210. Enrollment only permitted concurrently with NAVL 210. (Navy faculty)

NAVL 303 *Evolution of Warfare I* Two Credit Hours

This course provides the student with a general knowledge of the concepts and art of warfare along with its evolution from the beginning of recorded history to the present. Included are the considerations of the influence that political, economic, sociological, and technological factors, along with different forms of leadership, have had on warfare, and also the theoretical principles behind modern strategy and tactics. (Marine Corps faculty)

NAVL 304 *Evolution of Warfare II* Three Credit Hours

Prerequisite: NAVL 303

This course enables the student to acquire a working knowledge of the more practical aspects of warfare and the U.S. Marine Corps. The general principles of warfare addressed in NAVL 303 are considered as they relate to the small unit level. Tactical aspects of offensive combat are examined in detail. The student is given the opportunity to master skills required of the small unit leader—tactics and land navigation. Physical training is included to prepare students for summer training at Officer Candidates School, Quantico, Virginia. (Marine Corps faculty)

NAVL 310 *Naval Ship Systems I (Engineering)* Two Credit Hours

Detailed study of ship design, hydrodynamic forces, stability, propulsion, electrical theory and distribution, hydraulic theory and ship control, and damage control. Included are basic concepts of theory/design of steam, gas turbine, diesel, and nuclear propulsion. Case studies on leadership/ethical issues in the engineering arena are also covered. (Navy faculty)

NAVL 311 *Naval Ship Systems II (Weapons)* Two Credit Hours

Outlines the theory and employment of weapons systems. Student explores the processes of detection, evaluation, threat analysis, weapon selection, delivery, guidance, and explosives. Fire control systems and major weapons types are discussed, including capabilities and limitations. The physical aspects of radar and underwater sound are described. Facets of command, control, communications, computers, and intelligence are explored as a means of weapons system integration. The tactical and strategic significance of command and control warfare and information warfare is discussed. This course if supplemented with review/analysis of case studies involving the moral and ethical responsibilities of leaders in the employment of weapons. (Navy faculty)

NAVL 402 *Fundamentals of Maneuver Warfare* Three Credit Hours

Fundamentals of Maneuver Warfare is a detailed look at broad aspects of warfare and their interactions with maneuver warfare doctrine. Specific focus is on the United States Marine Corps as the premier maneuver warfare fighting institution. This class examines the historical influences of amphibious warfare and the development of USMC maneuver warfare doctrine on current tactical, operational, and strategic engagements. Case studies regarding the implications of maneuver warfare practices in current and future operations will be conducted throughout the course of study. (Marine Corps faculty)

NAVL 403 *Leadership and Ethics* Two Credit Hours

Prerequisite: NAVL 402 (Marine option) or NAVL 410 (Navy option)

Completes the final preparations of Ensigns and Second Lieutenants. The course integrates an intellectual exploration of Western moral traditions and ethical philosophy with a variety of topics, such as military leadership, core values, and professional ethics; the UCMJ and Navy regulations; and discussions relating to the roles of enlisted members, junior and senior officers, command relationships, and the conduct of warfare. The course provides midshipmen with a foundation of moral traditions, combined with a discussion of actual current and historical events in the U.S. Navy and U.S. Marine Corps, to prepare them for the role and responsibilities of leadership in the naval service of the 21<sup>st</sup> century. (Navy and Marine Corps faculty)

**Students must be concurrently enrolled in NAVL 452 (Senior Naval Laboratory).**

NAVL 410 *Naval Operations and Seamanship* Three Credit Hours

Prerequisite: NAVL 210/220

A continued study of relative motion, formation tactics, and ship employment. Also included are introductions to naval operations analysis, ship behavior and characteristics in maneuvering, applied aspects of ship handling, afloat communications, naval command and control, naval warfare areas, and joint warfare. The course is supplemented with a review/analysis of case studies involving moral/ethical/leadership issues pertaining to the concepts listed above. (Navy faculty)

**Students must be concurrently enrolled in NAVL 420 (Naval Operations and Seamanship Laboratory).**

NAVL 420 *Naval Operations and Seamanship Laboratory* 0 Credit Hours

Prerequisite: NAVL 210/220

Laboratory exercise classroom session designed to parallel the lecture content of NAVL 410. Enrollment only permitted concurrently with NAVL 410. (Navy faculty)

NAVL 450 *Navy Training Laboratory* 0 Credit Hours

Required for all scholarship, Navy College Program midshipmen, and Seaman to Admiral-21 students. This lab is broken down by class year in order to provide professional education, navy specific training, and leadership development. Lab occasionally supplements Naval Science courses, as well. At the end of the 1/C year, all midshipmen will be prepared for commissioning in order to take on the roll of a junior officer in the Navy. (Navy faculty)

NAVL 451 *Marine Training Laboratory* 0 Credit Hours

Required for all scholarship, Marine option College Program midshipmen, and Marine Enlisted Commissioning Education Program students. This lab is broken down by class year in order to provide professional education, Marine specific training, and leadership development. This lab will also supplement Naval Science courses. At the end of the 1/C year, all midshipmen will be prepared for commissioning and life as a Marine Officer. (Marine Corps faculty)

NAVL 452 *Senior Naval Laboratory* 0 Credit Hours

Laboratory exercise classroom session designed to parallel the lecture content of NAVL 403. Guest speakers will expand on the lessons discussed in class. Additional training will cover fiscal responsibility, moral and ethical decision making, and the role of a junior/company grade officer. (Navy and Marine Corps faculty)

**Students must be concurrently enrolled in NAVL 403 (Naval Leadership and Ethics).**

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## Index

	Page
Academic Advisor .....	52
Academic Awards .....	27
Academic Calendar .....	6
Academic Classifications .....	39
Academic Criteria For Continuance.....	40
Academic Forgiveness/Fresh Start Policy.....	43
Academic Grievance, Student.....	47
Academic Discharge.....	41
Academic Policies .....	25
Academic Probation .....	41
Academic Support Center .....	58
Acceptance and Withdrawals .....	17
Account Statement .....	86
Accreditation.....	13
Administrative and Activity Directors .....	496
Admission Procedure .....	18
Admission Requirements	
High School Record.....	17
Entrance Examinations .....	17, 21
Personal.....	18
High School Courses.....	19
Advanced Placement .....	23
Advisory Services.....	52
Aerospace Studies, Department of.....	477
Air Force ROTC Program .....	80
Alcohol and Substance Abuse Prevention Program .....	54
Anthropology, Courses in .....	390
Archives .....	56
Army ROTC Program.....	75
Astronomy, Courses in.....	473
Athletic Facilities .....	102
Audit Status .....	28
Automobiles.....	68
Auxiliary Enterprises.....	498
Band .....	61
Beach House.....	65
Biology, Department of.....	164, 398
Board of Visitors .....	493
Boating Center.....	65
Business, Tommy and Victoria Baker School of .....	162, 168, 242
Cadet Activities, Department of.....	62
Campus Worship.....	60
Career Center.....	53



Catalog of Record .....	25	Engineering, School of.....	266
Change of Grade .....	29	Engineering Leadership and Program Management, Department of.....	310
Chemistry, Department of.....	170, 412	English; Department of English, Fine Arts, and Communications .....	192, 322
Choirs.....	61	English Fluency Policy .....	48
Civil and Environmental Engineering, Department of.....	178, 267	Entrance Examinations (SAT, ACT, TOEFL).....	21
Class Attendance Policy.....	31	Executive Staff.....	494
Class Privileges .....	39	Expenses .....	84
Classification of Cadets.....	39	Faculty.....	499
Clothing/Luggage .....	68	Fees/Charges .....	84, 85, 87
Club Sports Program.....	63	Fellowships .....	58
Clubs, Groups and Organizations.....	63	Final Exams.....	32
College Level Equivalency Program (CLEP).....	24	Financial Aid and Scholarships .....	89
Combining Courses.....	37	Fine Arts, Courses in .....	330
Commandant of Cadets.....	66	Fine Arts Series.....	61
Commencement Honors.....	36	Fitness Test .....	72
Commencement, Requirements to Participate .....	35	Fourth Class System .....	70
Company Academic Advisor .....	52	Fourth Class System for Transfer Students .....	72
Computing Resources.....	56	French, Courses in .....	214, 367
Computer Science, Department of Mathematics and.....	182, 443	General Education Student Learning Outcomes.....	112
Conduct Discharge .....	44	General Information .....	13
Confidentiality of Student Records (FERPA).....	49	Geography, Courses in.....	351
Construction Engineering.....	180, 267	German, Courses in.....	218, 370
Core Curriculum.....	111	Gold Stars.....	27
Counseling Center .....	54	Grade-Point Average (GPA) Computation .....	27
Course Load Requirements.....	37	Grade-Point Average (GPA) Requirements for Continuance .....	40
Course Overload.....	37	Grade Replacement .....	29
Courses of Study.....	161	Grades .....	25
Course Substitutions.....	37	Grades, Change of.....	29
Credit Earned through Testing.....	23	Grades, Incomplete.....	26
Criminal Justice, Department of.....	184, 312	Grades, Pass-Fail .....	27
Daniel Library .....	54	Graduate Courses .....	39
Day Student Status.....	45	Grants.....	91
Dean's List.....	27	Greater Issues Series .....	61
Degree Completion, Academic and Cadet Requirements for .....	33	Grievances.....	47
Degrees .....	32	Health Services.....	64
Demerits.....	67	Health and Human Performance, Department of.....	194, 228, 425
Deposit (OneCard Restricted)-Books, Supplies, Uniforms, and Accessories .	86	History, Department of.....	198, 335
Discharge		History of The Citadel.....	7
Academic and Second Academic.....	41, 43	Honor System.....	62
Conduct.....	44	Honors Program .....	104
Discipline .....	66	Hour Requirements for Continuance.....	41
Double Major .....	38	Humanities and Social Sciences, School of.....	311
Drug Testing, Mandatory .....	21	Infirmary .....	64
Education, Zucker Family School of.....	186, 256	Insurance, Group Hospital.....	64
Electrical and Computer Engineering, Department of.....	190, 286	Intellectual Property, Ownership .....	48
Emeriti Faculty .....	523	Intelligence and Security Studies, Department of.....	200, 353
Employment.....	65	Intercollegiate Athletics, Department of.....	102

International Baccalaureate Program.....	23	International Criminal Justice.....	143
International Student Services .....	59	International Relations.....	144
Internships.....	38	Law and Legal Studies.....	146
Intramural, Club and Recreational Athletics (ICRA) .....	63	Leadership Studies.....	147
Language Requirement, Placement, Bypass Credit and Waivers .....	363	Management Information Systems.....	148
Leadership.....	2, 67	Mechanical Engineering.....	149
Leadership Studies, Department of.....	475	Molecular Biology and Biochemistry.....	150
Leaves: Emergency, Medical, and Special.....	69	Non-Western Studies.....	151
Library.....	54	Philosophy.....	153
Loans.....	92	Psychology.....	154
Luggage.....	68	Southern Studies.....	155
Major, Change of .....	37	Sport Coaching.....	157
Marine Corps ROTC Program .....	77	Sport Management.....	158
Mark Clark Hall.....	65	Sustainability and Environmental Studies.....	159
Mathematics and Computer Science, Department of.....	210, 443	Mission Statement, Vision Statement, Core Values .....	14
Maymester.....	31	Modern Languages, Department of.....	214, 361
Mechanical Engineering Program.....	212, 298	Multicultural Student Services.....	59
Medical Care .....	64	Museum.....	56
Military Environment, Purpose of The Citadel's .....	16	Musical Organizations.....	61
Military Policies .....	66	Naval Science, Department of.....	487
Military Science, Department of.....	482	Navy/Marine ROTC Program.....	77
Ministry, Campus .....	59	Nursing, Swain Department of.....	226, 459
Minors:.....	118	Overdrawn Accounts .....	85
Aerospace Science.....	118	Overload, Course.....	37
African American Studies.....	119	Pass-Fail.....	27
American Politics: Democracy and the Political Process.....	121	Philosophy, Courses in.....	333
Applied Mathematics.....	122	Physical Effectiveness Program.....	72
Applied Physics.....	122	Physical Examinations .....	18
Applied Statistics.....	123	Physics, Department of.....	232, 464
Biology.....	124	Placement Policy .....	21, 363, 445
Business.....	125	Political Science, Department.....	234, 378
Chemistry.....	126	Prelaw and Premedical Advising Service .....	53
Chinese, French, German, or Spanish.....	127	Premedical-Pre dental Programs .....	400, 415
Civil and Environmental Engineering.....	128	Probation, Academic .....	41
Computer Engineering.....	129	Psychology, Department of.....	240, 392
Computer Programming.....	130	Publications.....	61, 62
Criminal Justice.....	131	Public Safety.....	64
Cybersecurity.....	132	Readmission.....	42
Cyber Interdisciplinary Studies.....	133	Refunds .....	88, 99
East Asian Studies.....	133	Religious Activities .....	59
Education.....	135	Religious Support.....	53
Electrical Engineering.....	136	Repeating Courses .....	29, 98
English.....	136	Required Physical Education Program.....	35, 117, 425
Fine Arts.....	137	Reserves and National Guard .....	69
History.....	139	Resident Tuition and Fees .....	85
Intelligence and Homeland Security.....	140	Ring Requirements .....	40
International and Military Affairs.....	141	ROTC, Fulfillment.....	34

ROTC, Graduation Requirements.....	33
ROTC, Non-cadet Enrollment .....	36
ROTC Programs .....	74
ROTC Programs, Change of .....	34
ROTC Scholarships .....	74, 75, 77, 78, 82, 95
Satisfactory Academic Progress.....	96
Scholarships .....	94
Science and Mathematics, Swain Family School of.....	397
Second Academic Discharge.....	43
Second Baccalaureate Degree.....	38
Senior Staff .....	494
Sociology, Courses in.....	320
Spanish, Courses in.....	222, 373
Sports Program .....	102
Statement of Students' Accounts .....	86
Statistics, Courses in .....	451
Student Support Programs, Services, and Activities .....	52
Students with Disabilities, Services for .....	28, 58
Study Abroad, International, and Domestic Programs .....	57, 145, 362
Substance Abuse Prevention Program.....	54
Summer School .....	31
Tactical Officer .....	52
Test of English as a Foreign Language (TOEFL).....	22
Testing Out Program.....	24
Transfer Credits .....	30
Transfer Student Admission.....	23
Undergraduate Curriculum	
Leadership.....	109
Core Curriculum.....	111
Major Curriculum.....	117
Minors.....	118
Uniforms .....	86
Veteran Programs	
Veteran Cadet Program. ....	46
Non-Cadet Veteran Day Program .....	22, 47
Veteran Students Policy .....	46
Veterans Services .....	95
Withdrawals from Courses.....	26
Work Programs.....	91

# NOTES