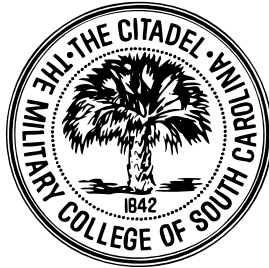


# **THE CITADEL**

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



**FOUNDED 1842**

**CATALOG ISSUE  
2015-2016**

# 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.



**Lieutenant General John W. Rosa, USAF, Retired  
President**



**Brigadier General Connie Ledoux Book  
Provost and Dean of the College**

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## The Citadel Academic Calendar 2015-2016

<b>2015</b>		<b>2016</b>	
Aug. 15	Class of 2019 Reports	Jan. 10	Winter Break Ends Corps of Cadets Return
Aug. 23	Corps of Cadets Upperclass Students Report	Jan. 13	Classes Begin for the Corps of Cadets
Aug. 25	Freshman Convocation	Jan. 18	Martin Luther King's Birthday (No Classes)
Aug. 26	Classes Begin for the Corps of Cadets	Jan. 19	Last Day to Drop/Add
Sept. 1	Last Day to Drop/Add	Mar. 16	Last Day to Withdraw with a Grade of "W"
Sept. 7	Labor Day (Classes Held)	Mar. 17-18	Leadership Symposium
Oct. 9-10	Parents' Weekend	Mar. 19	Corps Day
Oct. 21	Leadership Development Day No Classes for Corps of Cadets	Mar. 25	Spring Break Begins after Last Class
Nov. 3	Election Day - Corps of Cadets and CGC Classes Held Last Day to Withdraw with a Grade of "W"	Apr. 3	Spring Break Ends Corps of Cadets Return
Nov. 7-8	Homecoming Weekend	Apr. 4	All Classes Resume
Nov. 20	Thanksgiving Break Begins after Last Class	Apr. 9	Recognition Day
Nov. 29	Thanksgiving Break Ends	Apr. 27	Exams Begin for Corps of Cadets
Nov. 30	All Classes Resume	May 3	Exams End for Corps of Cadets
Dec. 10	Exams Begin for Corps of Cadets	May 7	Corps of Cadets Commencement
Dec. 16	Exams End for Corps of Cadets Winter Break Begins	May 9	Maymester and Summer I Evening Classes Begin
		May 27	Maymester Ends
		May 30	Memorial Day (No Classes)
		May 31	Summer I Day Classes Begin
		Jun. 22	Summer I Evening Classes End
		Jun. 27	Summer II Evening Classes Begin
		Jun. 28	Summer I Day Classes End
		Jul. 4	Independence Day
		Jul. 5	Summer II Day Classes Begin
		Aug. 3	Summer II Day Classes End
		Aug. 9	Summer II Evening Classes End

# A Brief History of The Citadel

## The Origin

In 1822, the South Carolina Legislature passed “An Act to Establish a Competent Force to act as a Municipal Guard for the Protection of the City of Charleston and Vicinity.” Land on the north end of Marion Square was selected for an arsenal and guard house, and in 1829, the architect, Frederick Wesner, completed the building which was known as The Citadel. A similar facility was constructed in Columbia, South Carolina, which was known as The Arsenal. State troops occupied both sites at a cost of \$24,000 a year.

Governor John P. Richardson felt that guard duties should be combined with a system of education. On December 20, 1842, the South Carolina Legislature passed an act establishing the South Carolina Military Academy. The Citadel and The Arsenal were converted into educational institutions, and students replaced the state troops. In 1845, the role of The Arsenal was changed to the instruction of freshmen. As a result, cadets spent their first year in Columbia and transferred to The Citadel for the remaining three years. The South Carolina Military Academy became known for its high academic standards and strict military discipline.

## Civil War Period

Enrollment in The South Carolina Military Academy increased from 34 students in 1843 to 296 in 1864. The \$200 tuition in 1843 increased to \$1,200 in 1864. When South Carolina seceded from the Union in December 1860, Major Robert Anderson moved his garrison of U.S. troops to Fort Sumter and requested reinforcements from the federal government. On January 9, 1861, Citadel cadets stationed on Morris Island fired on the U.S. steamer, the *Star of the West*, as it attempted to supply Fort Sumter with troops and supplies. This was the first overt act of the war.

On January 28, 1861, the Corps of Cadets was made part of the military organization of the state and was known as the Battalion of State Cadets. The Arsenal and The Citadel continued to operate as military academies; however, classes were often disrupted when the governor called the cadets into military service. Manning heavy guns, mounting guard duty, and escorting prisoners were among the services performed by the cadets. On February 18, 1865, The Citadel ceased operation as a college when Union troops entered Charleston and occupied the site. The Arsenal was burned by Sherman’s troops and never reopened.

### **Reopening**

In January 1882, The Citadel buildings were returned to the State of South Carolina after seventeen years in the possession of the United States government. In the same month, the legislature of South Carolina passed an act to reopen the college. The 1882 session began with an enrollment of 185 cadets.

### **Name Change**

In 1910, the name of the college was officially changed to The Citadel, the Military College of South Carolina. The word *Academy* had become synonymous with secondary schools, and the public had the misconception that the South Carolina Military Academy was a preparatory school.

### **New Campus**

The Citadel had outgrown its campus on Marion Square, despite numerous building additions and could accommodate only 325 students. In 1918, the City of Charleston gave the State of South Carolina 176 acres on the banks of the Ashley River for a new campus. In 1922, the college moved to its current location.

Today, the picturesque campus contains 26 major buildings. In addition to a Corps of approximately 2300 cadets—coeducational since 1996—The Citadel Graduate College offers undergraduate and graduate degree programs during the evening and summer. *The U.S. News & World Report* has ranked The Citadel among the best colleges in the region in its surveys of “America’s Best Colleges.”

### **Military Service**

As early as 1846, Citadel cadets served as drill instructors for the recruits of South Carolina’s Palmetto Regiment prior to the regiment’s departure for the Mexican War.

During the Civil War, the Corps of Cadets participated in eight engagements. The flag of the Corps of Cadets includes eight battle streamers representing those engagements and one streamer representing the Confederate States Army.

In the war with Spain in 1898, more Citadel alumni volunteered for service than were needed. In World War I, Citadel graduates were among the first contingents of American troops to fight with the English and French divisions. In major conflicts since World War II, Citadel cadets have continued to perform military service for their country. Twenty-three cadets served on active duty as members of the National Guard and Reservists during Operation Desert Storm.

Throughout The Citadel’s 162-year history, the military college has produced scores of graduates who have selflessly served their country, often giving their lives, to protect our freedom and the freedom of our allies. As we fight the war on terrorism in Afghanistan, Iraq and other regions, we honor our cadets



and graduates who continue The Citadel's tradition of service and sacrifice. The Citadel History section of the college's website contains a listing of alumni who have made the supreme sacrifice for their country.

### **The Student Body**

In 1864, there were 145 cadets in the Corps, and when the move to the new campus was made, there were almost 300 cadets. In 1947-48, 2271 students were enrolled, including cadets and veterans. Nearly 3500 veterans of World War II and the Korean conflict, most of whom were civilian students, attended the College under the G.I. Bill. The Citadel program for veterans ended in 1960, but was resumed in 1967. The Veterans' Civilian Day Program was suspended in 1992, and then re-instated in 2010. The Corps of Cadets maintains a strength of approximately 2300 cadets. Through The Citadel Graduate College, undergraduate programs have been offered for citizens of the Lowcountry since 1966, and the graduate programs have been available since 1968. In the 1993-94 academic year, that college was formally designated as the College of Graduate and Professional Studies, and in 2007, renamed to The Citadel Graduate College. This college offers 5 undergraduate degrees and 29 graduate degree programs. The Citadel also offers a Maymester and Summer Program through The Citadel Graduate College.

### **Archives and Museum**

The Archives contains manuscript material, photographs, and films pertaining to The Citadel. In 1966, General Mark W. Clark donated his personal military and official papers covering his career in World War II, the Austrian Occupation, the Korean War, and presidency of The Citadel. Other notable collections include the papers of Pulitzer Prize winning historian, Bruce Catton; the Civil War letters of General Ellison Capers, Citadel Class of 1857; and the papers of Vice Admiral Friedrich Ruge, who was Rommel's naval advisor. Authors and scholars from the United States and Europe frequently visit the Archives to research the collections.

The Museum contains exhibits, which trace the history of The Citadel from 1842 to the present and features the military, academic, social, and athletic aspects of cadet life. In addition, Citadel rings from 1895 to the present are exhibited. Citadel graduates who lost their lives in World War II, Korea, Vietnam, Lebanon, Grenada, and Iraq are memorialized in photograph albums, which are on display in the Museum. Access to the Archives and Museum will be limited in the 2014-2015 academic year due to building renovations.

## 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 Accreditation Council, P.O. Box 721173, Norman, OK 73070. Telephone: 405-329-2424. The web address is [www.mpacsite.org](http://www.mpacsite.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 com-

munication 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 2,100 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, and Bachelor of Science in Electrical Engineering) 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 1,000. The primary service area is the South Carolina Lowcountry. The Citadel Graduate College offers four baccalaureate degree programs (Bachelor of Arts in Criminal Justice, Bachelor of Science in Business Administration, Bachelor of Science in Civil Engineering, and Bachelor of Science in Electrical Engineering), 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 3,200 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 Leader Development Model**

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

### **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, physical 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. A final path to admission for the initial applicant who fails to meet height/weight and body fat standards would be to pass the Citadel Physical Fitness Test.

**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:

<b>Area</b>	<b>Units</b>	
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 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.
Laboratory Science	3	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</b>

physical science, general environmental science, 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 a 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.

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:

<b>Grade</b>	<b>Quality-Points Per Semester Hour</b>
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 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 the Academic Support Center 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.

### **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 academics or conduct may transfer back to The Citadel no more than four (4) pre-approved courses taken during that 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) or a course offered through The Citadel Graduate College.

### **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 7 days 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, 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; or physics.

Graduates in 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 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:** The ROTC requirement for cadets serves two purposes. First, ROTC course work plays a major role in The Citadel's mission to educate and prepare graduates to become principled leaders in all walks of life. Second, ROTC coursework is an essential component of the criteria to receive a commission in one of the armed forces. All cadets are, therefore, required to enroll in and pass an ROTC course for every semester during which they are enrolled at The Citadel or until they have completed eight semesters or met graduation requirements. If extenuating circumstances beyond the control of the cadet require that he/she withdraw or not register for 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 for Academic Affairs. 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 the 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 the enrollment in a lower-level course.

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.

*ROTC classes may not be used to satisfy elective requirements in any course of study.*

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. 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. A change in ROTC program does not reduce the number of semesters of ROTC required for graduation.

**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, must have passed the Corps Physical Fitness Test, and must have met height/weight requirements as presented 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.

### **Fine Arts Requirement**

Freshmen and Sophomores should attend at least one approved Fine Arts performance each semester.

### **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 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.

### **Academic Classifications**

Academic classifications of 4A (first-semester freshman) through 3B (second-semester sophomore) are based strictly on hours earned. For example, to be classified 3A (first-semester sophomore), the cadet's total hours earned must be no less than 8 fewer than the total hours required through the spring semester of the freshman year of the major course of study. A table of credit hours required for each academic classification for each major is provided on the Citadel webpage under "Registrar."

To be academically eligible to be classified as a first-semester senior (1A), a cadet must have earned a sufficient number of hours to be no more than 8 hours short of the number of hours required in the major course of study through the spring semester of the junior year.

Academic classification is used by the Office of Financial Aid to determine loan eligibility and by the Commandant's Office 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 and (4) have met the height/weight requirement 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.

<b>Total Hours (Quality Hours Plus Transfer &amp; Pass/Fail Hours)</b>	<b>Grade-Point Average for Continuance on Probation</b>
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 the table.

<b>Total Hours (Quality Hours Plus Transfer &amp; Pass/Fail Hours)</b>	<b>Grade-Point Average for Continuance without Probation</b>
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.

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 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.

### **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.

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, and all required physical education (RPED) courses and who have been cleared by the Commandant and the Treasurer may apply for Day Student status through the Office of the Registrar. Students who have completed ROTC, RPED, and LDRS requirements and have been cleared by the Commandant's Office and the Treasurer, but who have completed fewer than eight semesters in the Corps of Cadets may apply for Day Student status *only if* they need fewer than 12 hours of credit to complete their degrees.

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.

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 hops and similar 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 evening students may enroll in up to six credit hours per semester during the day. Exceptions to this rule must be approved by the Associate Provost for Academic Affairs.

4. Veteran day students may enroll in up to six hours per semester in the evening program. Exceptions to this rule must be approved by the Associate Provost for Academic Affairs.

### **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  
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**

Each cadet company is assigned a staff member or an active duty officer who is currently serving one of the ROTC detachments at The Citadel. This officer provides counsel concerning matters of cadet lifestyle and regulations, provides leadership training in cadet company areas, and supervises drill periods.

### **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 annual Career Fairs, 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. A library of career-related reference materials and computer work stations are provided for student use. The office distributes a wide variety of career planning and career search information to students.

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

### **Pastoral Counseling**

Pastoral 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 pastors are available to assist students with pastoral 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.

The Library uses the campus network to provide organized access to carefully selected research and study resources via its website ([library.citadel.edu](http://library.citadel.edu)). Resources include a web-based catalog of library materials, full-text databases and citation indexes supporting all disciplines and electronic reserves. Through PASCAL Delivers (a statewide collaboration of South Carolina academic institutions that provides rapid delivery of books for students and faculty), interlibrary loan, and document delivery, the Library is able to provide access to materials outside its own collections. The Daniel Library collection consists of over 153,111 books, 113,310 electronic books, 125 online full-text and citation indexes, and over 12,000 electronic full text journals and print journal subscriptions. In addition, the Library holds DVDs and streaming videos, microforms, and maps. The Daniel Library is a federal document depository library.

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, instant messaging, and research consultations. In the required First-Year Experience course, 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 focus on unique information needs of each student and address specific research requirements of each course.

Daniel Library facilities provide individual and group study space. Facilities also include a wireless network accessible with library laptops or students' personal laptops. All computers allow access to electronic resources and the Internet, as well as software for word processing, spreadsheets, databases, and presentations.

Daniel Library Friends ([library.citadel.edu/friends](http://library.citadel.edu/friends)) sponsor a series of cultural events for the campus community throughout the school year.

During the academic year, the Daniel Library is open seven days a week for a total of 83 hours, and Library faculty and staff are available to assist users during all operating hours.

### **Computing Resources**

The Citadel provides all students with an email account and superior computing resources, which include over a dozen computer labs located in classroom/academic buildings and a small lab in each of the barracks. All labs are equipped with personal computers and high-speed networked printers while others have additional equipment, such as scanners for scanning text or photos. Most of the college's 100+ classrooms and auditoriums are equipped with multimedia technology, such as projection systems, interactive whiteboards, and digital presenters.

Information Technology staff members assist students at the IT Help Center in Bond Hall and from several IT repair workshops located in the barracks. Evening assistance is available at the IT Help Center and the Daniel Library. The Multimedia Services'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. Many areas around the campus are also configured with wireless networking.

Approximately 90 percent of 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 <http://www.citadel.edu/root/it/> or contact the IT Help Center staff at 1-843-953-HELP for more information.

### **Office of Fellowships**

The Citadel's Office of Fellowships identifies superior students and helps them prepare for national and international fellowships. Experienced point 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 affords 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 intent on applying 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 application process. The office is located in the Seminar Room (370D) in Bond Hall, 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 (the Center) provides support to Citadel students through the following programs:

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

The Writing Lab, as well as Services for Students with Disabilities and Academic Coaching are available to both graduate and undergraduate students. All other programs are limited to undergraduates.

The staff is comprised of professional tutors, graduate assistants, undergraduate students, and full-time personnel. Students may set up an appointment by emailing the Center at [ascenter@citadel.edu](mailto:ascenter@citadel.edu), calling 843-953-5305, or stopping by 117 Thompson Hall.

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

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

The Office of Multicultural Student Services and International Studies (MS-SIS) 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. The office is also responsible for coordinating the college's Access and Equity program.

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 MSSIS 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.

A variety of study abroad opportunities for students who are interested in an overseas study experience are also available. Students are encouraged to come to the office where they may view resource materials, receive guidance on available programs and receive assistance with the study abroad application process.

The Citadel Success Institute (CSI) is also administered by the MSSIS Office. CSI is a four-week summer transition program offered to students who have been academically accepted and medically cleared to enter The Citadel. The program is designed to introduce participants to college academics, assist them in preparing for the physical requirements of the Corps of Cadets, and help them become acclimated to the campus and its resources.

## **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  
Church of Christ  
Episcopal  
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 ROTC (Campus Crusade for Christ-CRU)  
Campus Outreach  
Full Gospel Business Men's Fellowship  
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 Episcopal 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 Cadet Activities

This department, with offices located in Mark Clark Hall, provides activities for cadets outside of the classroom that allow them to broaden their talents and interests. Major activity areas include publications, social events, and clubs and organizations.

### Cadet Activities Publications

*The Brigadier*, published by a staff of cadets, serves as the campus cadet newspaper. Approximately six issues are published each semester.

*The Sphinx*, the college yearbook, is published annually by a staff of cadets. This publication serves as a semi-official record of the cadets’ year.

*The Guidon*, the handbook for fourth class cadets, is published annually by the Cadet Activities staff. It contains a complete description of the activities of the Corps of Cadets, Citadel history, customs and courtesies, and duties and responsibilities of cadets. It is available online early in the summer and the book is issued to the fourth class cadets after arriving on campus.

### **Social Events**

Social activities such as harbor cruises, dance classes, visits to assistant living homes, and fourth class Super Bowl party are planned and conducted by the staff of the Department of Cadet Activities.

Members of the Cadet Activities staff also maintain an open door policy to assist or advise any cadet on a variety of issues.

### **Clubs and Societies**

Membership in a wide variety of clubs, societies, and other organizations is available to all cadets and active duty students. Among these are literary and discussion groups; professional societies; military, religious, and athletic organizations; and recreational and service clubs. The span of these activities is so broad and so varied that all cadets and active duty students should be able to find organizations that fit their interests and talents.

### **Club Sports Program**

The Club Sports program is supervised by the Department of Health, Exercise and Sport Science. A Director of Club Sports, faculty advisors and volunteer coaches support each team's captains. Club Sports provide limited extramural competition in activities that are not governed by the NCAA or Southern Conference. Club sports historically established include ice hockey, lacrosse, pistol, men's and women's rugby, sailing, men's golf, and men's soccer.

### **Intramural Athletic Program**

The intramural athletic program is an integral part of extracurricular life at The Citadel. Competition can be intense as cadets compete during the academic year for their companies. Administered by the Department of Health, Exercise and Sport Science, the program includes individual and team competition, typically in freshman and upperclass leagues.

### **Extramural and Instructional Sports Program**

Occasionally, students have a shared interest in a sport or other physical activity not included in the Required Physical Education, Club Sport or Intramural programs. Most every year, cadets who have excelled in an intramural event want to play in a regional tournament in the same sport, and many cadets want to explore other athletic opportunities such as crossfit, martial arts, rock climbing or power lifting. The Department of Health, Exercise and Sport Science strives to support these special events with the help of a Director of Intramurals and Extramurals.

### **Health Services**

The Citadel Infirmary provides acute care services for the South Carolina Corps of Cadets. These services include outpatient medical clinics during the duty day, a walk-in nurse clinic after hours, and round-the-clock inpatient care

(36 beds) during the academic year. In the summer, outpatient clinics (only) are provided for cadets on a limited schedule. Infirmary services are covered by the annual cadet Infirmary fee.

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

Supplemental services (immunizations, medications, X-Ray, ECG, etc.) are provided for cadets at cost. When needed, lab specimens are collected by the Infirmary and sent to a commercial laboratory off campus. Charges for supplemental services are applied to the cadet's OneCard Restricted Account. If desired, the Infirmary secretary will provide an itemized list of charges 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. Supplemental insurance is mandatory to defray the costs of hospitalization, emergency care, ambulance transportation, specialty medical and surgical care. Cadets must notify the Infirmary immediately of any changes in insurance coverage. Charges for emergency room visits, subspecialty medical care, hospitalizations, dental care, and other services not provided by the Infirmary, must be settled directly with the medical provider. 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 hospitals 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: <http://www.citadel.edu/root/infirmary-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 assigning campus parking spaces and 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**

The office of the Department of Cadet Activities is housed on the second floor in Mark Clark Hall, which serves as the student union building. Named after General Mark W. Clark, it has been in use since 1958. On the first floor are a reception room, snack bar, book store, gift shop, post office, and barber shop. An auditorium, the alcove lounge, the Greater Issues Room, and several meeting rooms are on the second floor. On the third floor are the Catholic chaplain's office and chapel, the Episcopal chaplain's office, the Honor Court room, and the office of The Citadel's photographer.

### **Beach House**

The Colonel Robert R. McCormick Beach House is on the Isle of Palms, about a half hour's drive from the campus. This functional two-story clubhouse, overlooking the Atlantic Ocean, is controlled by The Citadel Alumni Affairs Office. It is primarily for the use of cadets, CGC students, faculty and staff, but can be rented to outside groups. Facilities include a large ballroom, shower facilities, sheltered picnic area and outdoor sports areas. The grounds are floodlighted to facilitate evening parties.

### **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. While eight semesters of ROTC training are required of all cadets attending The Citadel and graduates are encouraged to seek a commission in one of the armed force services, cadet graduates 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 for Logistics and Personnel, the Assistant Commandant of Operations and Training, the Assistant Commandant for Leadership Programs, the Command 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 Tactical Officers exercise the implementation of all Citadel policies as well as Cadet Regulations in their supervision of life in the barracks, through teaching, coaching, and counseling 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, 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 Citadel cadet.

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 accounted for. 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 24 Hour Schedule 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.

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 Tactical 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. 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, Christmas, 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 a date set in the spring semester. 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 upperclass 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 Weigh-in is held shortly after the cadets return for the fall and spring semesters. The Corps Physical Fitness Test is given each term. By regulation, cadets are required to take this test every semester. Detailed information on both is found in Chapter Five of the cadet regulation entitled *The White Book*. Any cadet failing to meet the standards set is considered Physically Deficient resulting in loss of privileges and rank. Programs are designed to help those cadets work towards reaching the minimum requirements in each area, but it is the individual cadet's responsibility to participate. Seniors who do not meet the Height/Weight Standard and/or 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, 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 eight semesters or met graduation requirements. 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 \$3500 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 Cadet Leader Course (CLC), 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 five-week Cadet Leader Course (CLC) and receive one-half of the base pay of a Second Lieutenant plus travel to and from CLC 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 for CLC attendance and commissioning.
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 "hand-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 Navy Department 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 four 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 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 serve aboard an operational ship or squadron in the fleet.
  - o Marine midshipmen receive two weeks of specialized training in mountain warfare, amphibious operations, and combined arms.
- 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, 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 (NAVL 201) and Naval Leadership and Ethics (NAVL 403) ROTC courses in order to meet graduation and commissioning requirements. MECEP Active Duty students are required to complete Evolution of Warfare I (NAVL 303), Amphibious Warfare (NAVL 402), and Naval Leadership and Ethics (NAVL 403) ROTC courses; however, the Professor of Naval Science may grant waivers for Evolution of Warfare and Amphibious 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. 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 2.5 cumulative GPA for contract and 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.

### **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 \$900 per year for books.

**Type 2** - pays college tuition and most lab fees up to \$18,000 per year and \$900 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 fees as cadets, except for auxiliary fees related to living expenses and the OneCard Restricted deposit. 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. Freshman bills are normally due the last Friday in July, and upperclass 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 upperclass 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](http://citadel.edu) website. There will 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](http://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 on-line. *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 Chief Operating Officer. 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>. In addition, students will be charged room and board on a per diem basis.

*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 January 1 of each year. These forms are available online at <http://FAFSA.ed.gov>. The financial aid office 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 January 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 if:

- 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 Perkins Loan Program***

The Federal Perkins Loan Program provides students who demonstrate exceptional financial need with long term, low interest loans for educational expenses. These loans range from \$300 to \$4,000 per year at a 5% interest rate. Federal legislation requires that priority be given to students with exceptional need and to full-time undergraduate applicants. Repayment begins after a nine-month grace period post-graduation or if enrollment falls below a half-time basis. Students may be allowed up to ten years to repay this loan, based upon the amount borrowed, with a minimum monthly payment of \$40. Loan repayment deferments are granted under certain conditions. There are repayment cancellation provisions for graduates who enter specific fields of teaching, teach in designated schools, serve in hostile areas, volunteer under the Peace Corps or the Domestic Volunteer Service Act of 1973, or serve as a law enforcement or corrections officer.

### ***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.

### **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; priority filing deadline is April 30.

### **Scholarships**

The Citadel's Scholarship Program is designed to support commendable candidates who desire a college education and meet the following goals: To attract the nation's most outstanding high school graduates; to reward the undergraduate excellence of the college's enrolled students; and to assist worthy candidates who demonstrate financial need. Annually, The Citadel awards more than 3 million dollars in academic scholarships to entering freshmen candidates and current upperclassmen. More than 25 freshmen are awarded a full academic scholarship that covers the entire catalog cost of attendance to The Citadel. A complete catalog of the school's scholarship opportunities is available on the Office of Financial Aid's webpage on The Citadel website under "Cadet Scholarships."

### **Scholarship Applications**

Applicants for admission to The Citadel are automatically considered for scholarships based on the information provided on the admissions application. Priority consideration for scholarship funds is given to candidates who apply before November 15 each year. **Upperclassmen** are required to complete a scholarship application, on the Office of Financial Aid webpage on The Citadel website, by May 5 each year. Additionally, it is recommended that each applicant complete a *Free Application for Federal Aid (FAFSA)* each year to determine eligibility for need-based scholarships.

### **Determination of Awards**

All scholarship applications are given careful consideration by the Scholarship Committee. Each application is evaluated and ranked objectively on the basis of the applicant's class standing, grade point ratio, SAT or ACT scores, personal



achievement and leadership potential. Many scholarships contain restrictions as stipulated in deeds of trust. The Citadel matches the most qualified scholarship candidates to such restrictions.

### **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-year or three-year ROTC scholarships that cover all tuition, fees, and books. These scholarships do not cover the cost of room and board. 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 Services:** Veterans services are administered under the umbrella of student financial aid at The Citadel. Veterans services 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
- Ch. 1607 - (REAP, Reserve Education Assistance Program).

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 Coordinator at The Citadel. An applicant should contact the VA 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 the veterans' 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 by undergraduate students is defined as a failure to meet at least one of the following standards:

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 total hours\*
  - b. 1.5 with 40-69 total hours\*
  - c. 1.7 with 70-99 total hours\*
  - d. 2.0 with > 99 total hours\*

\*Total hours = GPA hours + transfer hours + pass/fail hours
3. Attempted credit hours cannot exceed 207 hours or more than 150% of 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 form is available on the Office of Financial Aid & Scholarship's webpage on The Citadel website.

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).

SAP 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

When evaluating SAP, a student's repeated courses will be counted in both attempted and earned hours.

## 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 "institutionally-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 so are covered for the 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-student-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. 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, along with a top of the line training 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 Markmanship 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 should be to Dr. Jack W. Rhodes, Honors Program, The Citadel, 171 Moultrie Street, Charleston, SC 29409-6370. Phone: 843-953-3708. Email: rhodesj@citadel.edu. 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 2.8 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 211/311/411: Honors Personal and Professional Development I, II, and III; 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: Directed Research Project.

Students majoring in one of the liberal arts or social sciences will be required to complete all of the following lower-level Honors courses: HONR 211/311/411: Honors Personal and Professional Development I, II, and III; HONR 101/102/201/201: 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.

### Freshman Honors Courses

HONR 101 and 102	<i>Honors English I &amp; II: The Aesthetic Context</i>	Three Credit Hours Each Semester
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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") instead of ENGL 101 and 102 ("Composition and Literature"). Students who successfully complete the first semester of the Honors Program will be allowed to enroll in ENGL 102 and may fulfill their Core Curriculum requirement in freshman English by successfully completing that course.

HONR 103 and 104	<i>Honors History I &amp; II: The Social, Political, and Historical Context</i>	Three Credit Hours Each Semester
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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 132: HONR 131 with a grade of "C" or higher or MATH 131 with a grade of "B" or higher.

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  
Juniors or seniors 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, 311 *Honors Personal and Professional Development I, II, and III* Three Credit Hours  
and 411 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. Three credit hours (PASS/FAIL) will be granted upon completion of HONR 411.

### 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, 311, and 411. They will be recognized as Honors Program Graduates in their commencement ceremony, 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 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, this course focuses on 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 a focus on 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.

**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 fall of 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 Ethical Fitness® Seminar (EFS) designed to promote ethical culture, a luncheon or dinner with a distinguished ethics speaker, and a follow-on ethics essay recorded in each cadet's *eLeadership 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 the *Junior Ethics Enrichment Experience* is a graduation requirement.

**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 the value of their moral character and the leadership lessons learned at The Citadel. Further, cadets engage with facilita-



tors 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 representatives to leave positive legacies wherever they serve in the future. Written reflections produced during the seminar become part of each cadet's *eLeadership Portfolio* and a personal vision statement is collected and held for distribution to each cadet at a future date after graduation. 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. Later studies, while they will go deeper and further into a particular field, will necessarily require the student's attention to be more narrowly focused. 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, whereas later studies will concentrate on the content of knowledge in a presupposed form. 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 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.

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.

### **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.

Two semesters of literature complete the core curriculum requirement in English. All students must take ENGL 201 (Major British Writers I) and then may choose 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). 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 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:

<b>Core Math Requirements</b>	<b>Other Possible Choices</b>
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 104/106	MATH 119/106 MATH 119/MATH 131 MATH 131/107 MATH 131/132
MATH 106/107	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 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 317/327, and BIOL 318/328. 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 communicate 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.

### **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 one course 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 Leadership Studies**

The minor in Leadership Studies consists of courses from a number of academic departments. The minor is intended to highlight and reinforce the centrality of leadership in the Citadel experience. The minor focuses more on an understanding of the nature of leadership than on the development of leadership skills. The minor in Leadership Studies is intended for students who, majoring in whatever fields they have chosen, wish to

supplement their study in those principal content areas with a scholarly consideration of the subject of leadership.

*Objectives:*

The Minor in Leadership Studies is designed to address learning, scholarship, and critical thinking about leadership from various analytical perspectives and, as a result, to give students a broad understanding of the nature of effective leadership. This minor complements the “leadership laboratory” aspect of cadet life at The Citadel through interdisciplinary study employing historical, political, literary, psychological, and business administration 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 command, the minor in Leadership Studies builds on those practical experiences with an academic focus on the subject. Looking at factual, fictional, and theoretical models of leadership, the various courses examine leadership questions not only with respect to effectiveness but also in their more problematic aspects—such as abuse of power, male and female stereotypes, cultural chauvinism, and questions of duty versus individual responsibility. The curriculum as a whole addresses issues of leadership as such, as opposed to a concern with issues directly related to the circumstances of particular times and places.

*Structure of the Minor:*

The minor in Leadership Studies consists of five courses (15 credit hours total) — three academic electives from the schools/departments of Education, English, Business Administration, History, Political Science, and Psychology; one experiential course and LDRS 401, Senior Seminar in Leadership.

Academic Electives (Choose 3 for a total of 9 hours)

- BADM 371 Leadership in Organizations
- EDUC 330 Developing Leadership Skills through Peer Counseling
- ENGL 371 Literary Paradigms of Leadership
- HIST 371 Historical Studies in Leadership
- LDRS 320 Leadership Communications
- LDRS 433 Special Topics in Leadership
- PESM 404 Leadership in Health, Exercise, and Sport Science Organizations
- PHIL 301 Ethics
- PSCI 371 Leadership in Politics
- PSCI 305 American Presidency
- PSYC 371 Psychology of Leadership

Experiential Course

- LDRS 401 Senior Leadership Seminar/Project

*Total Credit Hours Required—15, at least 9 of which must be completed at The Citadel.*

For further information, please contact BG Harry, Department Head, Department of Leadership Studies.



## 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 391	2	Fluids Laboratory
PHYS 393	1	Flight Simulation
PHYS 410	3	Thermodynamics
PHYS 441	3	Fluid Dynamics
ASTR 201	3	Astronomy
ASTR 243	3	Astrobiology
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 (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
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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
SOCI 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 3 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 361, 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 410 3 (Thermodynamics)

PHYS 307/357 4 (Electronic Instrumentation)

PHYS 301 3 (Biological Physics)

PHYS 319 2 (Research Planning)

PHYS 420 3 (Research Participation)

### 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 (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.

### *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 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. Required courses: (9 credit hours)

- |          |  |
|----------|--|
| STAT 361 | Introduction to Probability and Statistics |
| STAT 366 | Applied Statistics                         |
| STAT 461 | Data Analysis                              |

2. Electives (6 credit hours)

Choose one of these two sequences:

- PSCI 308 and PSCI 393  
PSYC 201 and PSYC 203

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 308 | Genetics     |
| BIOL 310 | Microbiology |

- 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 301 Invertebrate Zoology
- BIOL 302 Comparative Vertebrate Anatomy
- BIOL 309 Animal Behavior
- BIOL 317 Human Anatomy and Physiology I
- BIOL 318 Human Anatomy and Physiology II
- BIOL 327 Human Anatomy and Physiology I Laboratory
- BIOL 328 Human Anatomy and Physiology II Laboratory
- BIOL 322 History of Biology
- BIOL 403 Mammalian Physiology
- BIOL 414 Environmental Physiology
- BIOL 419 Economic Botany
- BIOL 421 Toxicology

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\*
  - BADM 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.

2. Electives: (10 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. Any combination of additional upper-level chemistry courses which bring the total number of hours to at least 18 including at least one upper-level laboratory course, CHEM 315, 316, or 460. Again, this total is exclusive of the eight hours of General Chemistry required for the core curriculum.

The additional courses must be approved in advance by the Head of the Department of Chemistry.

Total Credit Hours required—18

For further information, please contact the Department of Chemistry.

### **The 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. Courses 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 and above.

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 301	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: (13 credit hours)

CIVL 309	Structural Analysis, 4 credit hours
CIVL 402	Concrete Design, 3 credit hours
CIVL 406	Steel Design, 3 credit hours
CIVL 423	Structural Capstone, 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 co-requisites for each of the above courses must be met as presented in the course descriptions.

Total Credit Hours Required: 20 for Structures or 23 for Environmental, at least 6 of which must be completed at The Citadel.

For further information, please contact the Department of Civil and Environmental 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 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 3 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 national training standards for information security professionals, as recommended by the National Security Agency and the Committee on National Security Systems.

*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 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.

For further information, please contact the Department of Modern Languages, Literatures and Cultures and/or the Department of Political Science.

### **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)

For further information, please contact the Department of Electrical and Computer Engineering.



## 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 no overlap more than two classes with the minor requirements.**

### *Structure of the Minor:*

1. Choose **two** required introductory courses: (6 credit hours)
 

FNAR 205	Music Appreciation
FNAR 206	Art Appreciation
ENGL 209	Introduction to Film
  
2. Choose **three** additional elective courses, including at least two at or above the 300 level. (9 credit hours)
 

BAND 101/102/201/202 (this total sequence for Band counts as 3 credits)	
FNAR 205	Music Appreciation
FNAR 206	Art Appreciation
FNAR 207	Art History
FNAR 209	Music Theory
FNAR 250	Special Topics in Fine Arts
BAND 301/302/401/402 (this total sequence for Band counts as 3 credits)	
FNAR 304	Drawing
FNAR 305	Painting
FNAR 306	Photography
ENGL 208	Special Topics (where appropriate)
ENGL 209	Introduction to Film
ENGL 221	Introduction to Creative Writing

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
ENGL 499	Internship (may be used for 3 credits)

\*Other courses may be considered and approved by the English 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 of English.

### **Minor in Health**

Objectives:

The minor in health is designed to allow students to acquire knowledge and understanding in a discipline universal in application. Participation in this program will allow students to attain a level of expertise in an area that may complement their major and increase avenues of professional development. This minor program is *not* designed to meet requirements for South Carolina public school licensure in health education.

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

Students will have an opportunity to explore the role of health in an advanced society. Students will gain knowledge and skills which can advance their health status and wellness of their family.

*Structure of the Minor:*

#### *1. Required Courses*

HLED 400	First Aid and Emergency Care
HLED 401	Nutrition
HLED 403	Human Sexuality
PSYC 202	Developmental Psychology

#### *2. Electives*

The student may choose any two of the following courses:

BIOL 209	Environmental Science
BIOL 406	Ecology
HLED 302	Drug and Substance Abuse

HLED 404	Public Health
HLED 408	Epidemiology
HLED 410	Consumer Health
PHED 319	Physiology of Exercise
PHED 406	Directed Field Experience
PHED 420	Senior Research Project
PSYC 304	Abnormal Psychology
PSYC 404	Industrial/Organizational Psychology

Students should confer with their faculty advisors concerning a desire to minor in health and file a declaration of intent with the Head of the Department of Health, Exercise, and Sport Science. This declaration will include a projected course of study. The department head will approve the proposed program of study and verify its completion to the Registrar.

Total Credit Hours Required—18

For further information, please contact the Department of Health, Exercise, and Sport Science.

### **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 of all history minors: 15 hours beyond the College Core Requirements in History (HIST 103-104), at least 3 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. Because of its history, reputation, and affiliation with the military and with state and federal law enforcement agencies, The Citadel is uniquely placed to help develop leadership capabilities in the areas of intelligence and homeland security. This minor is designed to enhance leadership capabilities by giving students a broad understanding of intelligence and homeland security issues in related areas such as terrorism, intelligence collections systems, cyber security, local and national security, engineering, defense contracting, and emergency management. The minor in intelligence and homeland security will enhance the knowledge and skills of students majoring in other subjects who are 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 minor is approved for Criminal Justice majors providing they take one of the two required courses, either Homeland Security or the Intel-**

**Intelligence Collection Systems and Programs as a general elective; they still must take both courses. Additionally, Criminal Justice majors must take three non-CRMJ courses as general electives.**

*Structure of the Minor:*

1. *Required Courses*

- INTL 210 Homeland Security
- INTL 310 Intelligence Collection Systems and Programs

2. *Electives (choose three)*

- BIOL 207 Bioterrorism
- CHEM 309 Chemistry of War
- CRMJ 330 Emergency Management
- CRMJ 331 Cyber Investigations
- CRMJ 332 Comparative Homeland Security
- CRMJ 333 Immigration and Security
- CRMJ 383 Comparative Criminal Justice
- CSCI 227 Introduction to Cybersecurity
- INTL 311 US Intelligence Successes and Failures
- PSCI 310 Domestic Terrorism
- 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 Criminal Justice.

**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

BADM 412 International Economics

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 3 must be completed at The Citadel*

For further information, please contact the Department of Political Science and/or the Department of Criminal Justice.

### **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:*

- Required Courses*

CRMJ 382	Drugs and Crime
CRMJ 383	Comparative Criminal Justice Systems
CRMJ 384	International Crime
PSCI 342	International Terrorism
- 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 3 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
BADM 412:	International Economics
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 6 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  
SOCJ 201 Introduction to Sociology  
ENGL 411 Writing in the Professions

*Total Credit Hours Required—15, of which 3 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 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  
or 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 301	Dynamics

2. Elective Fields of Emphasis:

Energy: (16 credit hours)

MECH 310	Thermo-Fluids I w/lab
MECH 311	Thermo-Fluids II w/lab
MATH 335	Applied Mathematics II
MECH 415	Heat Transfer

**OR**

Mechatronics: (16 credit hours)

ELEC 201	Electric Circuit Analysis I
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 w/lab
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



**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

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	ANTH 202
HIST 357	PSCI 337		BADM 412
HIST 358	PSCI 338	SPAN 303	CRMJ 383
HIST 361	PSCI 339	SPAN 304	CRMJ 384
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 3 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 upper-division 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. Upper-division Philosophy Courses. Any two of the following four courses must be completed; total of six hours credit:
  - a. PHIL 301 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 English Department Head 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.



## 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 (using computer assisted technology) and communicate their findings through multiple media (oral presentations, written papers, and paper presentations at conferences). The curriculum for the minor has been arranged in such a fashion as 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: (13 credit hours)*

PSYC 203 Research Design in Psychology\*

PSYC 301 Experimental Psychology

\*Students who have STAT 160, may substitute an additional psychology course for Research Design (PSYC 203)

One course from each grouping:

Cluster A (PSYC 304) Abnormal Psychology

(PSYC 306) Theories of Personality

Cluster B (PSYC 403) Learning and Motivation

(PSYC 405) History and Systems of Psychology

(PSYC 302) Physiological Psychology

#### *2. Electives: (6 credit hours)*

Choose two:

(PSYC 402) Cognitive Psychology

(PSYC 404) Industrial/Organizational Psychology

(PSYC 202) Developmental Psychology

(PSYC 305) Social Psychology

*Total Credit Hours Required—19, 3 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:	Disunion and the War for Southern Independence
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 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.**

For further information, please contact the Department of Health, Exercise, and Sport Science

## **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, fine arts and philosophy courses in the Department of English, 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: biology; business; chemistry; civil engineering; computer science; criminal justice; education; electrical engineering; English; health, exercise, and sport science; history; mathematics; mechanical engineering; modern languages; physics; political science; psychology. A thorough premedical preparation is also available through the B.A. Chemistry or the B.S. Biology.

**BIOLOGY MAJOR**  
**First Semester**

**FRESHMAN YEAR**

Introduction to Biology I .....	BIOL	130	3	(3,0)*
Introduction to Biology I Laboratory.....	BIOL	131	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**

Genetics.....	BIOL	308	4	(3,3)
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**

Biology Elective**.....	BIOL		3(4)	(var)
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 310, BIOL 401, BIOL 402, BIOL 424; BIOL 427; Ecology and Field Biology: BIOL 209, BIOL 314, BIOL 407, BIOL 408, BIOL 409, BIOL 426; Organismal Biology: BIOL 203, BIOL 208, BIOL 301, BIOL 302, BIOL 309, BIOL 410, BIOL 419, BIOL 421; Physiological Biology: BIOL 403, BIOL 414. One additional biology elective must be chosen from the above courses and BIOL 320, BIOL 322, BIOL 412.

\*\*\*See page 108 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**

FRESHMAN YEAR

Introduction to Biology II .....	BIOL	140	3	(3,0)*
Introduction to Biology II Laboratory .....	BIOL	141	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 .....				

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 required ROTC courses.

**BIOLOGY MAJOR****Teaching Specialization in Biology & Comprehensive/Broad Field Science****First Semester****FRESHMAN YEAR**

Introduction to Biology1 .....	BIOL	130	3	(3,0)*
Introduction to Biology1 Laboratory .....	BIOL	131	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**

Genetics.....	BIOL	308	4	(3,3)
Major British Writers .....	ENGL	201	3	(3,0)
Applied Calculus 1 .....	MATH	106***	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**

Biology Elective** .....	BIOL		3(4)	(var)
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)
Teaching Students with Special Needs .....	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; Animal Behavior and Evolution Area: BIOL 208, BIOL 307; Botany Area: BIOL 203, BIOL 314; Zoology Area: BIOL 301, BIOL 302, BIOL 408, BIOL 410.

\*\*\*See page 108 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**

**Teaching Specialization in Biology & Comprehensive Broad Field Science  
Second Semester**

**FRESHMAN YEAR**

Introduction to Biology II .....	BIOL	140	3	(3,0)*
Introduction to Biology II Laboratory .....	BIOL	141	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)
General Psychology .....	PSYC	201	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)
Educational Psychology .....	EDUC	202	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 185.**

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 required ROTC courses.

**PRE-BUSINESS  
First Semester**

**FRESHMAN YEAR**

Composition and Literature .....	ENGL	101	3	(3,0)*
Biology, Chemistry, or Physics .....			4	(3,2)
Introduction to Business .....	BADM	101	3	(3,0
or				
Microcomputer Applications .....	CSCI	110	3	(3,0)
A 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**

**Major British Writers .....	ENGL	201	3	(3,0)
Business Computer Applications .....	BADM	217	3	(3,0)
A Modern Language .....			3	(3,0)
**Principles of Macroeconomics.....	BADM	201	3	(3,0)
**Applied Calculus I .....	MATH	106***	3	(3,0)
Intro to Fin. Acct. and Reporting .....	BADM	211	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)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*May be taken in either sophomore semester.

\*\*\*See page 108 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.

**PRE-BUSINESS  
Second Semester**

FRESHMAN YEAR

Composition and Literature .....	ENGL	102	3	(3,0)
Biology, Chemistry, or Physics .....			4	(3,2)
Elementary Mathematical Modeling.....	MATH	104***	3	(3,0)
A 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

**Communications in Business.....	BADM	216	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
A Modern Language .....			3	(3,0)
**Principles of Microeconomics .....	BADM	202	3	(3,0)
**Business Statistics I.....	BADM	205	3	(3,0)
Introduction to Managerial Accounting.....	BADM	212	3	(3,0)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)

NOTE: Students in Pre-Business are expected to be admitted into the Business Major after the sophomore year. Admission into the Business Major is contingent upon earning a passing grade on each of the following courses that provide the foundation for the major and must achieve a grade of C or better in each of the following five courses: BADM 202, BADM 205, BADM 211, BADM 212, and BADM 216.

**BUSINESS MAJOR**  
**First Semester**

**JUNIOR YEAR**

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)
Management and Organizational Behavior.....	BADM	338	3	(3,0)
**Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

***Production Management .....	BADM	410	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 either semester of the junior year.

\*\*\*May be taken either semester of the senior year.

+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 MAJOR**  
**Second Semester**

JUNIOR YEAR

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)
Leadership in Organizations .....	BADM	371	3	(3,0)
+1st Year Advanced ROTC.....				

SENIOR YEAR

***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 .....				

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**BUSINESS MAJOR**  
**Accounting Concentration**  
**First Semester**

**JUNIOR YEAR**

Biology, Chemistry or Physics.....			4	(3,2)*
Intermediate Financial Accounting I.....	BADM	300	3	(3,0)
Managerial Accounting.....	BADM	302	3	(3,0)
Legal and Ethical Environment of Business.....	BADM	305	3	(3,0)
**Marketing Principles.....	BADM	309	3	(3,0)
Management and Organizational Behavior....	BADM	338	3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

**Production Management.....	BADM	410	3	(3,0)
Auditing and Assurance Services.....	BADM	416	3	(3,0)
Accounting Information Systems.....	BADM	427	3	(3,0)
History of Western or World Civilization.....	HIST		3	(3,0)
+2nd Year Advanced ROTC.....				
Senior Leadership Integration Seminar.....	LDRS	411	0	(1,0)

**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.*

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*May be taken in either 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.

**BUSINESS MAJOR**  
**Accounting Concentration**  
**Second Semester**

**JUNIOR YEAR**

Biology, Chemistry or Physics.....			4	(3,2)
Intermediate Financial Accounting II .....	BADM	301	3	(3,0)
Commercial Law.....	BADM	318	3	(3,0)
Business Finance.....	BADM	321	3	(3,0)
Leadership in Organizations .....	BADM	371	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 .....				

HOURS REQUIRED FOR GRADUATION: 129 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**BUSINESS MAJOR**  
**Entrepreneurship Pathway**  
**First Semester**

**JUNIOR YEAR**

Biology, Chemistry or Physics.....			4	(3,2)*
**English, American, or World Literature.....	ENGL		3	(3,0)
**History of Western or World Civilization ..	HIST		3	(3,0)
**Management & Organizational Behavior ..	BADM	338	3	(3,0)
**Principled Entrepreneurship & The Free Enterprise System .....	BADM	327	3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Relationship Marketing.....	BADM	415	3	(3,0)
Leadership in Organizations .....	BADM	371	3	(3,0)
***Production Management .....	BADM	410	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.

\*\*May be taken in either semester of the junior year.

\*\*\*May be taken either semester of the senior year.

\*\*\*\*Selected in consultation with the student's academic advisor, May or may not be an additional business elective.

+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 MAJOR**  
**Entrepreneurship Pathway**  
**Second Semester**

JUNIOR YEAR

Biology, Chemistry or Physics.....			4	(3,2)
**Marketing Principles.....	BADM 309		3	(3,0)
**Business Finance.....	BADM 321		3	(3,0)
Small Business Management & Entrepreneurship .....	BADM 425		3	(3,0)
Legal & Ethical Environment of Business.....	BADM 305		3	(3,0)
+1st Year Advanced ROTC.....				

SENIOR YEAR

***Strategic Management .....	BADM 422		3	(3,0)
***Social Science Core Course .....			3	(3,0)
Technology & Entrepreneurship .....	BADM 428		3	(3,0)
****Approved Elective .....			3	(3,0)
****Approved Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**BUSINESS MAJOR**  
**Financial Services Pathway**  
**First Semester**

**JUNIOR YEAR**

Biology, Chemistry or Physics.....			4	(3,2)*
Business Finance.....	BADM	321	3	(3,0)
Financial Markets and Institutions.....	BADM	435	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
Management & Organizational Behavior .....	BADM	338	3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

***Production Management .....	BADM	410	3	(3,0)
English, American, or World Literature.....	ENGL		3	(3,0)
Financial Modeling .....	BADM	331	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.

\*\*May be taken either semester of the junior year.

\*\*\*May be taken either semester of the senior year.

\*\*\*\*Selected in consultation with the student's academic advisor. May or may not be an additional business elective.

+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 MAJOR**  
**Financial Services Pathway**  
**Second Semester**

JUNIOR YEAR

Biology, Chemistry or Physics.....			4	(3,2)
**Marketing Principles.....	BADM	309	3	(3,0)
**Legal & Ethical Environment of Business.....	BADM	305	3	(3,0)
Leadership in Organizations .....	BADM	371	3	(3,0)
Intermediate Finance.....	BADM	322	3	(3,0)
+1st Year Advanced ROTC.....				

SENIOR YEAR

Investments .....	BADM	404	3	(3,0)
***Strategic Management .....	BADM	422	3	(3,0)
***Social Science Core Course .....			3	(3,0)
****Approved Elective .....			3	(3,0)
****Approved Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**BUSINESS MAJOR**  
**Professional Selling Pathway**  
**First Semester**

**JUNIOR YEAR**

Biology, Chemistry or Physics.....			4	(3,2)*
History of Western or World Civilization .....	HIST		3	(3,0)
Management & Organizational Behavior .....	BADM	338	3	(3,0)
Marketing Principles .....	BADM	309	3	(3,0)
Relationship Marketing.....	BADM	415	3	(3,0)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

***Production Management .....	BADM	410	3	(3,0)
Advanced Professional Selling .....	BADM	408	3	(3,0)
English, American, or World Literature.....	ENGL		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.

\*\*May be taken either semester of the junior year.

\*\*\*May be taken either semester of the senior year.

\*\*\*\*Selected in consultation with the student's academic advisor. May or may not be an additional business elective.

+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 MAJOR**  
**Professional Selling Pathway**  
**Second Semester**

JUNIOR YEAR

Biology, Chemistry or Physics.....			4	(3,2)*
Professional Selling .....	BADM 406		3	(3,0)
**Legal & Ethical Environment of Business.....	BADM 305		3	(3,0)
**Business Finance.....	BADM 321		3	(3,0)
Leadership in Organizations .....	BADM 371		3	(3,0)
+1st Year Advanced ROTC.....				

SENIOR YEAR

***Strategic Management .....	BADM 422		3	(3,0)
***Social Science Core Course .....			3	(3,0)
Consumer Behavior .....	BADM 414		3	(3,0)
****Approved Elective .....			3	(3,0)
****Approved Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**BUSINESS MAJOR**  
**Supply Chain Pathway**  
**First Semester**

**JUNIOR YEAR**

Biology, Chemistry or Physics.....			4	(3,2)*
**Legal and Ethical Environment of Business .....	BADM	305	3	(3,0)
**English, American, or World Literature.....	ENGL		3	(3,0)
**Management and Organizational Behavior.....	BADM	338	3	(3,0)
Quality Management.....	BADM	323	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)
History of Western or World Civilization .....	HIST		3	(3,0)
Logistics Management .....	BADM	421	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.

\*\*May be taken either semester of the junior year.

\*\*\*May be taken either semester of the senior year.

\*\*\*\*Selected in consultation with the student's academic advisor. May or may not be an additional business elective.

+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 MAJOR**  
**Supply Chain Pathway**  
**Second Semester**

**JUNIOR YEAR**

Biology, Chemistry or Physics.....			4	(3,2)
**Marketing Principles.....	BADM	309	3	(3,0)
**Business Finance.....	BADM	321	3	(3,0)
Supply Chain Management.....	BADM	429	3	(3,0)
****Approved Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				

**SENIOR YEAR**

***Strategic Management .....	BADM	422	3	(3,0)
***Social Science Core Course .....			3	(3,0)
Purchasing and Materials Management.....	BADM	324	3	(3,0)
****Approved Elective .....			3	(3,0)
****Approved Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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)
Advanced Chemistry 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 308, 310, 421, 424, 427; CHEM 402, 404, 410; MATH 303, 335, 343, 344, 381, 403, 411, 422, 470; PHYS 301, 307, 308, 315, 320, 323, 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

HOURS REQUIRED FOR GRADUATION: 124 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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 .....	CHEM	163	1	(0,3)
Chemistry Majors				
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)
Physical Chemistry I.....	CHEM	305	3	(3,0)
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)
Biochemistry I.....	CHEM	409	3	(3,0)
Biochemistry Laboratory .....	CHEM	460	1	(0,3)
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 .....	CHEM	164	1	(0,3)
Chemistry Majors				
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)
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)
Biochemistry II .....	CHEM	410	3	(3,0)
A Modern Language .....			3	(3,0)
+1st Year Advanced ROTC .....				

**SENIOR YEAR**

Instrumental Methods .....	CHEM	302	4	(2,4)
**Approved Biology Elective .....	BIOL		4	(3,3)
Elective .....			3	(3,0)
Senior Research II .....	CHEM	420	3	
+2nd Year Advanced ROTC .....				

\*\*Approved Biology electives: BIOL 308, 310, 421, 424, 427

HOURS REQUIRED FOR GRADUATION: 121 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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.

\*\* Required Advanced Courses: One course must be taken from each of the following areas: CHEM 300 or 302; CHEM 305/315 or 306/316; CHEM 409 or 410. The second course of the sequence may be taken as an approved elective or general elective.

\*\*\*See page 108 for more choices.

\*\*\*\*Approved Electives: CHEM 300, 302, 305, 306, 402, 409 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 .....					

HOURS REQUIRED FOR GRADUATION: 118-120 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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 Chemistry Majors .....	CHEM	163	1	(0,3)
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)
Educational Psychology .....	EDUC	202	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)
Teaching Students with Special Needs .....	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	2	(2,0)
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.

\*\*Chemistry elective chosen from CHEM 208/218, 302, 305/315, 402 or 410.

\*\*\*See page 108 for more choices.

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)
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)
Adolescent Development .....	EDUC	206	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 185.**

HOURS REQUIRED FOR GRADUATION: 124-125 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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**

Major British Writers .....	ENGL	201	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	301	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)
Professional Sustainability .....	CIVL	317	1	(1,0)
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)
**** Technical Elective.....			3	
+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 422, CIVL 423, CIVL 424, or CIVL 425.

\*\*\*To be selected from an approved list of courses in the humanities or social sciences.

\*\*\*\*\*All freshman and sophomore level engineering and science courses must be successfully completed prior to enrolling in senior level classes, excepting CIVL 418.



**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	222	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**

English, American, or World Literature.....	ENGL		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)
Elements of Electrical Engineering .....	ELEC	308	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 Design Elective.....	CIVL		3	(2,2)
***Humanities/Social Science.....			3	(3,0)
+2nd Year Advanced ROTC .....				

\*\*\*\*Elective to be an approved engineering or science course.

HOURS REQUIRED FOR GRADUATION: 135 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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**

Major British Writers .....	ENGL	201	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)
Social Science Core Course.....			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.

+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	4	(3,2)
Analytic Geometry and Calculus II .....	MATH	132	4	(4,0)
History of Western or World Civilization .....	HIST		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, American, or World Literature.....	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)
Linear Algebra .....	MATH	240	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)
Introduction to Probability and Statistics.....	STAT	361	3	(3,0)
History of Western or World Civilization .....	HIST		3	(3,0)
++Biology, Chemistry or Physics .....			4	(3,2)
+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: 129 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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 108 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 .....				

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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 .....			4	(3,2)
Social Science Core Course.....	PSCI	102	3	(3,0)
Educational Psychology.....	EDUC	202	3	(3,0)
History of World Civilization I.....	HIST	105	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 108 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)
**Approved Social Studies Elective.....			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)
History of World Civilization II.....	HIST	106	3	(3,0)
Art Appreciation.....	FNAR	206	3	(3,0)
Adolescent Development.....	EDUC	206	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 expected to transfer into the Education Major upon meeting the requirements for admission. Admission into the Education Major is contingent upon the following:

- 1) Official passing scores on all three parts of PRAXIS I exams on file at The Citadel.
- 2) Maintaining a cumulative GPA of 2.750 or higher;
- 3) Passed both EDUC 101 and EDUC 202;

Students who are not qualified to move into the Education Major will not be permitted to enroll in 300- or 400-level Education courses, other than EDUC 307 and EDUC 312, and will be counseled to consider another major.

\*\*Selected from anthropology, geography, political science, economics, psychology, or history.

**SOCIAL STUDIES EDUCATION MAJOR**  
**First Semester**

**JUNIOR YEAR**

Teaching Students with Special Needs .....	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 Secondary

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)
Foundations in Reading .....	EDUC	301	3	(3,0)

+1st Year and 2nd 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 1 May of the previous academic year for admission to the spring internship.

- 1) Completed all professional education and content coursework;
- 2) Completed the following professional education courses with a cumulative GPA of at least 2.750: EDUC 101, 202, 206, 306, 312, and 401;
- 3) Have on file at The Citadel South Carolina State Department of Education clearance through the FBI and SLED;
- 4) Maintained a cumulative GPA of at least 2.750;
- 5) Completed successfully all previous field experiences;
- 6) Have 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.

HOURS REQUIRED FOR GRADUATION: 123 plus the credit hours from successful completion of RPED 25 0, RPED 251, and all required ROTC courses.

**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**

Major British Writers .....	ENGL	201	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 415, ELEC 416, ELEC 418, ELEC 419, ELEC 423, ELEC 424, ELEC 425, ELEC 426, ELEC 427 and CSCI 420.

+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 ..... Electrical Engineers	ELEC	206	3	(3,0)
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**

English, American or World Literature .....	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); *Engineering Management*, (CIVL 411), *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), 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 required ROTC courses.

**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)
Mythology, or.....	ENGL	211	3	(3,0)
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.....	ENGL	413		
Approved Elective (ENGL 325-336).....	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**

American Literature Elective				
(ENGL 338-351).....	ENGL		3	(3,0)
Approved Elective (ENGL 310-324).....	ENGL		3	(3,0)
Approved Elective (ENGL 301-499).....	ENGL		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 108 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)
Introduction to Philosophy.....	PHIL	201	3	(3,0)
Literary Theory .....	ENGL	216	3	(3,0)
A Modern Language .....			3	(3,0)
+2nd Year Basic ROTC.....				
Required Physical Education .....	RPED		0	(0,1)

JUNIOR YEAR

Chaucer, or .....	ENGL	301	3	(3,0)
Milton.....	ENGL	305		
Internship in Professional Communication....	ENGL	499	3	(3,0)
Approved Elective (ENGL 301-499).....	ENGL		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				

SENIOR YEAR

American Literature Elective (ENGL 338-351).....	ENGL		3	(3,0)
Approved Elective (ENGL 301-499).....	ENGL		3	(3,0)
Approved Elective (ENGL 301-499).....	ENGL		3	(3,0)
Senior Seminar I, or .....	ENGL	402		
Senior Seminar II .....	ENGL	403	3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**HEALTH, EXERCISE, AND SPORT SCIENCE****B.S. in Exercise Science****First Semester****FRESHMAN YEAR**

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)
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	317	3	(3,0)
Human Anatomy and Physiology I Laboratory.....	BIOL	327	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, Exercise, and Sport Science.

\*\*\*See page 108 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, EXERCISE, AND SPORT SCIENCE**

**B.S. in Exercise Science**

**Second Semester**

**FRESHMAN YEAR**

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	318	3	(3,0)
Human Anatomy and Physiology II Laboratory .....	BIOL	328	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 .....				

HOURS REQUIRED FOR GRADUATION: 129 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**HEALTH, EXERCISE, AND SPORT SCIENCE****B.S. in Sport Management****First Semester****FRESHMAN YEAR**

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)
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)
Elementary Mathematical Modeling.....	MATH	104***	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)
The Governance of Sport.....	PESM	301	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)
Sport Sales .....	PESM	402	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, Exercise, and Sport Science.

\*\*\*See page 108 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, EXERCISE, AND SPORT SCIENCE**

**B.S. in Sport Management**

**Second Semester**

**FRESHMAN YEAR**

Composition and Literature .....	ENGL	102	3	(3,0)
History of Western or World Civilization .....	HIST		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)
Finite Mathematics .....	MATH	105***	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 Event and Facility Management.....	PESM	303	3	(3,0)
Sport Marketing .....	PESM	304	3	(3,0)
A Modern Language .....			3	(3,0)
Risk Management in Sport.....	PESM	305	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 .....				

HOURS REQUIRED FOR GRADUATION: 127 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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)
Introduction to History.....	HIST	203	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 108 for more choices.

+Must be numbered at the 300 or 400 level.

Group I (EUROPEAN): 321, 322, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 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, and 365.

Group IV (MILITARY): 380, 381, 382, 383, 384, 385, 386, 387, and 391.

**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)
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 .....	PSCI		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 .....				

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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**

Major British Writers .....	ENGL	201	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.

**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

English, American or World Literature.....	ENGL		3	(3,0)
Applied Mathematics I.....	MATH	234	4	(4,0)
Linear Algebra .....	MATH	240	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)
Introduction to Probability and Statistics.....	STAT	361	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 required ROTC courses.

**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**

Major British Writers .....	ENGL	201	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)
Electric Circuit Analysis I.....	ELEC	201	3	(3,0)
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)
Applied Mathematics II .....	MATH	335	3	(3,0)
Measurements & Instrumentation w/Lab.....	MECH	330	3	(2,2)
Manufacturing Processes w/Lab .....	MECH	340	3	(2,2)
Computer Applications w/Lab .....	MECH	325	3	(2,2)
+1st Year Advanced ROTC.....				
Junior Ethics Enrichment Experience.....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Heat Transfer.....	MECH	415	3	(3,0)
Mechanical Engineering System Design .....	MECH	460	3	(3,0)
Senior Design I .....	MECH	481	2	(1,2)
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)
Electric Circuit Analysis II.....	ELEC	202	3	(3,0)
Electrical Laboratory .....	ELEC	204	1	(0,2)
Dynamics .....	CIVL	301	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 w/Lab.....	MECH	350	3	(2,2)
**Technical Elective.....			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 required ROTC courses.

**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 108 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)
Advanced Modern Language .....	FREN		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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)
Social Science Core Course .....			3	(3,0)
Education in Modern Society.....	EDUC	101	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)
Adolescent Development .....	EDUC	206	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)
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 108 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)
+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)
Advanced Modern Language.....	FREN		3	(3,0)
Teaching Students with Special Needs .....	EDUC	312	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 .....	FREN	350	3	(3,0)
Teaching Internship in Teaching.....	EDUC	499	12	

**SEE NOTE AT BOTTOM OF PAGE 185.**

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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 108 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)
Advanced Modern Language.....	GERM		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**MODERN LANGUAGES, LITERATURES AND CULTURES MAJOR**  
**Teaching Specialization in 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)
Education in Modern Society.....	EDUC	101	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)
Adolescent Development.....	EDUC	206	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)
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 108 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**

**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)
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 German Composition.....	GERM	302	3	(3,0)
Advanced Modern Language.....	GERM		3	(3,0)
Advanced Modern Language.....	GERM		3	(3,0)
Teaching Students with Special Needs .....	EDUC	312	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 .....	GERM	450	3	(3,0)
Teaching .....				
Internship in Teaching.....	EDUC	499	12	

**SEE NOTE AT BOTTOM OF PAGE 185.**

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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 Composition .....	SPAN	302	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 108 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 Conversation .....	SPAN	301	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)
Advanced Modern Language .....	SPAN		3	(3,0)
Elective .....			3	(3,0)
Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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)
Social Science Core Course .....			3	(3,0)
Education in Modern Society .....	EDUC	101	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 Composition .....	SPAN	302	3	(3,0)
Advanced Modern Language .....	SPAN	305	3	(3,0)
Advanced Modern Language .....	SPAN		3	(3,0)
Adolescent Development .....	EDUC	206	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)
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 108 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)
+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 Conversation .....	SPAN	301	3	(3,0)
Advanced Modern Language.....	SPAN		3	(3,0)
Advanced Modern Language.....	SPAN		3	(3,0)
Teaching Students with Special Needs .....	EDUC	312	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.....	SPAN	450	3	(3,0)
Teaching				
Internship in Teaching.....	EDUC	499	12	

**SEE NOTE AT BOTTOM OF PAGE 185.**

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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)
History of Western or World Civilization .....	HIST		3	(3,0)
Introduction to Health, Exercise, Sport Science, and Physical Education.....	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 I.....	BIOL	317	3	(3,0)
Human Anatomy and Physiology I Laboratory .....	BIOL	327	1	(0,2)
Major British Writers .....	ENGL	201	3	(3,0)
Elementary Mathematical Modeling.....	MATH	104**	3	(3,0)
Motor Development .....	PHED	200	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)

\*Represents semester credit, lecture, and laboratory hours, in that order.

\*\*See page 108 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.

**PRE-PHYSICAL EDUCATION**

**Teaching Track**

**Second Semester**

**FRESHMAN YEAR**

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)
Social Science Core Course.....			3	(3,0)
Foundations of Fitness & Exercise .....	RPED	251	2	(2,0)
First Aid and CPR (ARC) .....	RPED	113	0	
+1st Year Basic ROTC.....				
Freshman Ethical Fitness Seminar.....	LDRS	111	0	(1,0)

**SOPHOMORE YEAR**

Human Anatomy and Physiology II.....	BIOL	318	3	(3,0)
Human Anatomy and Physiology II Laboratory.....	BIOL	328	1	(0,2)
English, American, or World Literature.....	ENGL		3	(3,0)
Motor Learning .....	PHED	235	3	(3,0)
Accommodating Persons with Disabilities within Sport and Physical Activity .....	PHED	203	3	(3,0)
Introduction to Teaching Physical Education	PHED	201	3	(3,0)
Educational Psychology.....	EDUC	202	3	(3,0)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC.....				

NOTE: The Pre-Physical Education (Teaching Track) student is expected to be admitted to the Physical Education (Teaching Track) Major at the end of the sophomore year. To be admitted to the Physical Education (Teaching Track) Major, the 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;
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. 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 the 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.

**PHYSICAL EDUCATION****Teaching Track****First Semester****JUNIOR YEAR**

Child Development .....	EDUC	307	3	(3,0)*
Biomechanical Kinesiology .....	EXSC	314	3	(3,0)
Methods of Teaching Rhythmic Activities.....	PHED	321	3	(3,1)
Elementary School Physical Education .....	PHED	433	3	(3,0)
Physical Science (Chemistry or Physics).....			4	(3,2)
+1st Year Advanced ROTC .....				
Junior Ethics Enrichment Experience .....	LDRS	311	0	(1,0)

**SENIOR YEAR**

Methods of Teaching School Health Education .....	HLED	407	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 School Curriculum .....	PHED	335	3	(3,0)
Teaching Reading and Writing in the Middle and 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.

+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**

**JUNIOR YEAR**

Adolescent Development.....	EDUC	206	3	(3,0)
Technology in Health, Exercise, Sport Science and Physical Education.....	PHED	300	3	(3,0)
Measurement and Evaluation.....	PHED	305	3	(3,0)
Methods of Teaching Individual and Dual Sports.....	PHED	350	3	(3,0)
Physical Science (Chemistry or Physics).....			4	
Elective .....			3	(3,0)
+1st Year Advanced ROTC.....				

**SENIOR YEAR**

Administration of Health, Exercise, Sport Science and Physical Education.....	PHED	404	3	(3,0)
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: Physical Education (Teaching Track) majors must make a formal application for admission to the Internship in Teaching (PHED 499) no later than 1 May of the previous academic year for admission to the spring internship in teaching. Admission is contingent upon the following:

- 1) Completed with a GPA of at least 2.750, all required course work except PHED 404, 421, and 499.
- 2) Completed the following professional education courses with a cumulative GPR of at least 2.750: EDUC 202, 206, 307; PHED 101, 200, 201, 235, 300, 301, 305, 306, 314, 319, 321, 335, 350, 433, 460; and HLED 407;
- 3) Successfully completed all previous field experiences;
- 4) Have on file at The Citadel official records of the appropriate PRAXIS II and Principles of Learning and Teaching (PLT) test scores.

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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)
Mathematical Physics .....	PHYS	320	3	(3,0)
Applied Mathematics II .....	MATH	335	3	(3,0)
Social Science Core Course.....			3	(3,0)
+++Approved Elective.....			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)
Quantum Mechanics I.....	PHYS	405	3	(3,0)
Advanced Physics Laboratory .....	PHYS	451	2	(0,4)
Research Participation .....	PHYS	420	3	(1,4)
General Chemistry I.....	CHEM	151	3	(3,0)
General Chemistry I Laboratory .....	CHEM	161	1	(0,2)
+2nd Year Advanced ROTC .....				
Senior Leadership Integration Seminar .....	LDRS	411	0	(1,0)

+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, or alternate courses 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)
Analytical Mechanics II.....	PHYS	316	3	(3,0)
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)
General Chemistry II.....	CHEM	152	3	(3,0)
General Chemistry II Laboratory.....	CHEM	162	1	(0,2)
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.

HOURS REQUIRED FOR GRADUATION: 130 plus the credit hours from the successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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 108 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 select one of the following to satisfy the social science core course requirement: ANTH 202, HONR 203, PSYC 201, or SOCI 201.

+++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)
++Social Science Core Course .....			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)
Departmental Elective .....			3	(3,0)
+++Subfield Elective .....	PSCI		3	(3,0)
General Elective .....			3	(3,0)
General Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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 108 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 select one of the following to satisfy the social science core course requirement: ANTH 202, HONR 203, PSYC 201, or SOCI 201.

+++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)
++Social Science Core Course .....			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**

Departmental Elective .....			3	(3,0)
+++Subfield Elective .....	PSCI		3	(3,0)
+++Subfield Elective .....	PSCI		3	(3,0)
General Elective .....			3	(3,0)
General Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**POLITICAL SCIENCE MAJOR**  
**Subfield C—Pre-Law and Legal Studies**  
**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**

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)

**SENIOR YEAR**

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 108 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 select one of the following to satisfy the social science core course requirement: ANTH 202, HONR 203, PSYC 201, or SOCI 201.

+++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**

**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)
++Social Science Core Course .....			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		
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 .....				

**SENIOR YEAR**

Departmental Elective .....			3	(3,0)
Constitutional Law: Powers of Government .....	PSCI	461	3	(3,0)
+++Subfield Elective .....	PSCI		3	(3,0)
General Elective .....			3	(3,0)
General Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 126 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

**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**

Physiological Psychology .....	PSYC	302	4	(3,2)
Theories of Personality .....	PSYC	306	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**

Psychology of Learning .....	PSYC	403	3	(3,0)
Approved Elective .....	FNAR		3	(3,0)
General Elective .....			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 108 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.



**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	301	4	(3,2)
Required Physical Education .....	RPED		0	(0,1)
+2nd Year Basic ROTC .....				

**JUNIOR YEAR**

Abnormal Psychology .....	PSYC	304	3	(3,0)
Social Science Core Course .....			3	(3,0)
Social Psychology .....	PSYC	305	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)
Advanced Psychological Study .....	PSYC	410	3	(3,0)
Cognitive Psychology .....	PSYC	402	3	(3,0)
General Elective .....			3	(3,0)
General Elective .....			3	(3,0)
+2nd Year Advanced ROTC .....				

HOURS REQUIRED FOR GRADUATION: 128 plus the credit hours from successful completion of RPED 250, RPED 251, and all required ROTC courses.

# **SCHOOL OF BUSINESS**

**Col. William N. Trumbull, Dean**

**Col. Janette W. Moody, Associate Dean**

**Col. Wesley M. Jones, Jr., Associate Dean**

# School of Business

Dean, Jolley Chair: Trumbull

Associate Deans: Jones, Moody

Professors: Bebensee, Ebeling, Foster, Green, Moody, Sharbrough, Silver, Sobel,  
Sparks, Strauch, Timmerman, Trumbull

Associate Professors: Arnold, Barth, Betterton, Bolt, Jones, Keogh, Lovvorn,  
Money, Morris, Riggle, Rishel, Smith, Woolsey

Assistant Professors: Karagiannidis, Ponomarov

The mission of the School of Business is to educate and develop 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 Pre-Business. In addition, students from within The Citadel who are pursuing other majors may change to Pre-Business. In order to be accepted as Business majors, these Pre-Business majors 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
- BADM 216 Communications in Business

In addition, all Pre-Business majors must complete the following Career Visioning exercises and elements as part of their application to become a Business Major:

As part of the course requirements of BADM 216:

- Basic Professional Resume
- Generic Cover Letter
- Professional References Page

Additionally:

- Complete a career interest inventory
- Attend 4 career visioning seminars during the sophomore year.

When Pre-Business majors are in their last semester of pre-business courses, they will be allowed one “transition” semester during which they may also take courses from the junior core for which they have already met the prerequisites. During the transition semester, pre-business majors must successfully complete all remaining admission requirements. If, at the end of this transition semester, the student’s admission requirements remain incomplete, then the student will not be allowed to enroll in any other business courses until the admission requirements are completed.

The Citadel’s undergraduate program, our principal focus, blends four semesters of science, four semesters of English, four semesters of foreign language courses, other traditional liberal arts courses, and upper-level business courses with a demanding on-campus military leadership laboratory — the South Carolina Corps of Cadets. This laboratory teaches self-awareness, stress management, creative problem-solving, communication, motivation, conflict management, and productive use of power and authority. In addition to living and working in this laboratory, cadets also take eight semesters of ROTC courses which emphasize communication skills, military professionalism, ethics, analysis of the defense structure, practice of leadership and management principles, and problem-solving skills.

For students interested in accounting careers, the School offers an accounting concentration. Students who choose to pursue this option use all of their departmental elective slots to satisfy concentration requirements as specified in the “Courses of Study” section of this catalog.

For students with career interest in supply chain and logistics management, professional selling, finance, or entrepreneurship pathways, the School offers a specialization in these areas. Students who choose to pursue this option must complete course work as specified in the “Courses of Study” section of this catalog.

The School of Business also participates in the interdisciplinary minor in Leadership Studies. For a full description of this minor, please refer to the entry in this catalog in the Department of English section.

Persons interested in the Master of Business Administration program, which is offered only through evening classes, should consult the Graduate Programs catalog for further information.

**Minor in Business**  
**(Please refer to p. 119)**

## 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 201     *Principles of Macroeconomics*     Three Credit Hours

Prerequisite: MATH 104 or MATH 105

Required of all business sophomores.

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 all business sophomores.

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 all business sophomores.

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 211 *Introduction to Financial Accounting and Reporting* Three Credit Hours

Required of all business sophomores.

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 all business sophomores.

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 business sophomores.

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.

BADM 217 *Computer Applications in Business* Three Credit Hours

Required of business sophomores.

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 300 *Intermediate Financial Accounting I* Three Credit Hours

Prerequisite: BADM 212

Required of all business majors with a concentration in accounting.

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 all business majors with a concentration in accounting.

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 all business majors with a concentration in accounting.

This course is a rigorous study of accounting in the manufacturing environment. It focuses on how costs are accumulated and communicated inside the organization. The course emphasizes how accounting information is used for decision-making, planning, and control.

BADM 305 *Legal & Ethical Environment of Business* Three Credit Hours

Required of all business juniors.

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 all business juniors.

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 318 *Commercial Law* Three Credit Hours

Prerequisite: BADM 305

Required of business majors with a concentration in accounting.

A detailed examination of commercial law topics including sales, commercial paper, secured transactions, bulk transfers, and bankruptcy.

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 211

Required of all business juniors.

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

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. This course focuses on using the tools of economics to understand the entrepreneurial process, including the role of profits and losses, discovery, and creative destruction. The course 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

Although there are no formal course prerequisites, 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

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 juniors.

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: PSYC 371 or BADM 338

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

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 environment. 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: 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 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

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 410 *Operations Management* Three Credit Hours

Prerequisites: BADM 205 or STAT 160, BADM 212, and BADM 338

Required of all business seniors.

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 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

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 all business majors with a concentration in accounting.

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

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

Required of all business majors with a concentration in accounting. 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

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 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 211, BADM 212, BADM 309, BADM 321, BADM 338

Required of all business seniors.

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

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 425 *Small Business Management/  
Entrepreneurship* Three Credit Hours

Prerequisite: Junior or senior standing in business

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 or corequisites: BADM 217, BADM 300 and BADM 302.

Required of business majors with a concentration in accounting.

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. Topics include software, hardware, security issues, systems documentation, and systems development, as well as privacy issues and ethical concerns. 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

Prerequisite: Junior or senior standing in business

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 *Seminar in Business* 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 Charleston-area 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. Kathryn-Richardson Jones, Associate Dean**

# Zucker Family School of Education

## PROGRAMS LEADING TO TEACHER CERTIFICATION

Dean of Education & Director of Teacher Education: Daniel

Associate Dean: Richardson-Jones

Professors: Daniel, Williams

Associate Professors: Brown, Graham, Hewett, Jefferson, Murray, Oberman,  
Richardson-Jones

Assistant Professors: Ilagan, Jocius

Visiting Assistant Professor: Thompson

Instructor: Albert

The purpose of the 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 and a K-12 program in physical education. While approximately 50 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 of the National Council for Accreditation of Teacher Education facilitate certification in all fifty states.

### Statement of Philosophy

The philosophy of the 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 effective 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 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 on the march, transforming itself into a Center of Excellence for the preparation of principled educational

leaders. Through our initial programs for teacher candidates for P-12 schools and our advanced programs for professional educators in P-20 schools, The Citadel's Professional Education Unit transforms cadets and graduate students into principled educational leaders capable of and committed to transforming our schools into learning communities where all children and youth succeed.

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 National Council for Accreditation of Teacher Education

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. In addition, a program for K-12 certification is available in physical education (see the Department of Health, Exercise and Sport Science section 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, Exercise, and Sport Science. 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 I basic skills exam in reading, writing, and mathematics. Students should take the PRAXIS I 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 the teacher education major.

### **Admission to Education Major**

To be admitted to the Education Major 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 I 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.

Students who have not met these requirements by the end of their sophomore year are not eligible for admission into a professional education program and will not be permitted to enroll in 300- (except EDUC 301, EDUC 307 and EDUC 312) or 400-level Education courses.

### **Admission to the Internship in Teaching (EDUC 499 or PHED 499)**

Students must make a 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. 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. Completed the following professional education courses with a cumulative GPA of at least 2.750: EDUC 101, 202, 206, 301, 306, 312, and 401 (See the Health, Exercise, and Sport Science section of this catalog for PHED courses);
3. Have on file at The Citadel South Carolina State Department of Education clearance through the FBI and SLED;
4. Maintained a cumulative GPA of at least 2.750;
5. Completed successfully all previous field experiences;
6. Have 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.

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 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 the curricular requirements may result in licensure by the South Carolina Department of Education. **A grade of “C” or better in EDUC 499 is necessary to qualify for teacher certification.**

## The Professional Education Board

To facilitate the college-wide mission of preparing principled leaders for professional education, The Citadel establishes (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, of Science and Mathematics, and of Graduate and Professional Studies. Beginning in September, 2006, the Professional Education Board will meet monthly during each academic year.

## 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 306     *Teaching Reading and Writing in the Middle and High School*     Three Credit Hours

Prerequisites: EDUC 202, EDUC 301, and EDUC 401

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     *Teaching Students with Special Needs*     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

Prerequisites: Admission to Senior Level Study

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.

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 9-12).

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. All students provide their own transportation. Formal application for admission to the Spring internship in teaching must be made no later than May 1<sup>st</sup> of the previous academic year.

# **SCHOOL OF ENGINEERING**

**Col. Ronald W. Welch, Dean**

**Department of Civil and Environmental Engineering  
Col. Kevin C. Bower, Head**

**Department of Electrical and Computer Engineering  
Col. Robert Barsanti, Head**

**Department of Engineering Leadership  
and Program Management  
Col. Charles O. Skipper, Head**

# Department of Civil & Environmental Engineering

Department Head: Bower

Professors: Bower, Davis, Fallon, Mays, Welch

Associate Professors: Murden, Woo

Assistant Professors: Ghanat, Grayson, Michalaka, Watson

## **Department's Mission Statement**

The mission of the Department of Civil and Environmental Engineering (CEE) is to provide a nationally recognized student-centered learning environment for the development of principled leaders in the civil and environmental engineering community 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 recognizes the civil engineer as a people-serving professional who manages resources as well as technology. The civil engineer plans, designs, constructs, and maintains 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 profession, 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 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 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 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.

## Student Outcomes

At the time of graduation from the civil engineering program, 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

### **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 civil engineering program is accredited by the Engineering Accreditation Commission of ABET, [www.ABET.org](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).

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.

*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 fifteen 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; a 60,000-pound hydraulic universal testing machine; a 10,000-inch-pound torsion 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.) is awarded to those who successfully complete the program of studies outlined in the course offerings section of this catalog.

Two humanity or social science electives, one technical elective, and one civil engineering design elective 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. 123)**

#### **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 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 301 *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 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, principal 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 317     *Professional Sustainability*     One Credit Hour

Prerequisite: Junior classification

Required of all Civil and Environmental Engineering juniors.

The 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 required to establish safe, healthy, equitable and vibrant communities. Course topics focus on preparing students to serve with distinction as technical leaders in addressing the needs of society and include: teamwork, public administration, communication, public policy, ethics, lifelong learning, attitudes, and leadership

Lecture: one hour.

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, MATH 231, and MATH 234

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 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 one of the following design courses in the spring of the senior year. Each course 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 422      *Comprehensive Project Design in Environmental Engineering*      Three Credit Hours

Prerequisites: Senior standing in civil and environmental engineering, CIVL 408.

Application to civil engineering principles, through group studies and lecture, to develop a solution for a comprehensive engineering problem devoted to water resources/ environmental engineering.

Lecture: two hours; laboratory: two hours.

CIVL 423      *Comprehensive Project Design in Structural Engineering*      Three Credit Hours

Prerequisites: Senior standing in civil and environmental engineering, CIVL 404, Corequisite: CIVL 406.

Application of civil engineering principles, through group studies and lecture, to develop a solution for a comprehensive structural engineering problem involving other aspects of civil engineering.

Lecture: two hours; laboratory: two hours.

CIVL 424      *Comprehensive Project Design in Geotechnical Engineering*      Three Credit Hours

Prerequisite: Senior standing in civil and environmental engineering.

Application of civil engineering principles, through group studies and lecture, to develop a solution for a comprehensive geotechnical engineering problem involving other aspects of civil engineering.

Lecture: two hours; laboratory: two hours.

CIVL 425     *Comprehensive Design Project in Civil Engineering*     Three Credit Hours

Prerequisite: Senior standing in civil and environmental engineering. Site development projects require CIVL 421 as prerequisite. Transportation project requires CIVL 302 as prerequisite.

Application of civil engineering principles, through team initiatives and lecture directives, to develop design solutions for a comprehensive problem using methods of professional engineering practice and involving multi-disciplinary aspects of civil engineering.

Lecture: two hours; laboratory: two hours.

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.

# Department of Electrical and Computer Engineering

Department Head: Barsanti

Professors: Barsanti, McKinney, Peebles

Associate Professors: Hayne, Potisuk, Skinner

Assistant Professor: Mazzaro

## 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 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 electrical engineering program is accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202.

## 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 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 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) and ELEC 415 (Electrical Measurements Laboratory), 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), 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 418	Advanced Digital Systems
ELEC 419	Computer Network Architecture
ELEC 423	Digital Signal Processing
ELEC 416	Communications Engineering
ELEC 416	Communications Engineering
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 415	Electrical Measurements Laboratory
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
ELEC 415	Electrical Measurements Laboratory

## **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, and digital circuits and 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 at least 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 Electrical Engineering (Please refer to p. 128)**

#### **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: ELEC 106 or MECH 101, 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 308 and ELEC 204 with grades of C or better.

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 courses for which ELEC 202 is a prerequisite.**

ELEC 204 *Electrical Laboratory* One Credit Hour

Prerequisites or corequisites: ELEC 202 or ELEC 308

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

Prerequisite: ELEC 106

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 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

Required of civil engineering juniors.

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 206

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, ELEC 206, 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 differential amplifiers, power amplifiers, multistage amplifiers, oscillators, filter circuits, and CMOS digital logic.

Lecture: three hours.

ELEC 403 *Electric Power Systems* Three Credit Hours

Prerequisites: ELEC 316 and 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* Two Credit Hours

Prerequisite: ELEC 313

Corequisite: ELEC 415.

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: two hours.



ELEC 418 *Advanced Digital Systems* Three Credit Hours

Prerequisites: 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, ELEC 318, and ELEC 330

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.

# Department of Engineering Leadership & Program Management Mechanical Engineering Program

Department Head: Skipper

Associate Professors: Bubacz, Rabb

Assistant Professor: Howison, Skenes

## **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:

- Succeed 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.
- Apply and operate current engineering and analysis tools and equipment to conduct and/or lead engineering analysis, design and research.
- 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.
- Pursue graduate education and/or professional registration as desired or required.
- Be 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.

### *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; a 10,000-inch-pound torsion machine; impact tester; grinder/polisher; dual chamber furnace; and equipment for making tension, compression, shearing, and most other accepted and significant tests on composites, metals concrete, wood and other structural materials. A transmission Polariscope and related equipment are available to investigate in a wide variety of two dimensional photo-elastic models.

### *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, 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.

### *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 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 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). **All scheduled freshman and sophomore level engineering, science, and mathematics courses must be completed before a student will be permitted to enroll in senior level courses offered by the Mechanical Engineering Program.**

### **Minor in Mechanical Engineering (Please refer to p. 139)**

#### **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 public infrastructure and 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, interface of 2D and 3D data with Computer Aided Manufacturing, simulation of rigid body motion, presentation software, and spreadsheets. Introduction to teaming and creativity.

Laboratory: 4 hours.

MECH 304      *Engineering Materials w/Lab*      Three Credit Hours  
Prerequisites: CIVL 304/307 and CHEM 151.

Course explores the relationships between the microscopic structure and macroscopic properties of materials used in engineering applications. The origin of mechanical, electrical, and thermal properties is studied. Important material failure modes such as 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 301.

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 flow in pipes and turbomachinery, external flows, power generation systems, refrigeration cycles, and total air-conditioning focusing on the control volume approach. 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 and the engineering design process to a hands-on project.

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 an automotive system to examine engine performance (Otto and Diesel Cycles) and heat exchangers and to high performance aircraft to examine the Brayton Cycle, compressible flow, external flow, lift, and drag. 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 MATLAB 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

Prerequisites: ELEC 202/204.

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 304/307.

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; application of finite element modeling; 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, welds (and welding techniques), 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 w/Lab*      Three Credit Hours

Prerequisites: CIVL 301, MECH 330, MATH 335.

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, mechanical, and aeronautical systems. Topics include system modeling using Laplace transform, frequency domain, state variable methods, Boolean logic and algebra, system hardware and software development, and interfacing for mechanical applications. Mathematical models are developed for electrical, mechanical, aeronautical, 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 to include applications of microprocessors and microcontrollers and digital electronics to the design and utilizations of embedded control systems in smart systems and products. Laboratory exercises include feedback design and system identification.

Lecture: 2 hours.

Laboratory: 2 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 design of high strength and critical application of materials, 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-built test 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 335, MECH 311.  
 The three modes of heat transfer (conduction, convection, and radiation) are studied in detail and applications are made to various engineering systems. The principles of conduction and convection are used to study the mechanisms of heat transfer during boiling, condensation and the design and operation of heat exchangers.  
 Lecture: 3 hours.
- MECH 416      *Mass and Energy Balances*      Three Credit Hours  
 Prerequisite: CHEM 152.  
 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 (MCNPIX) 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 301, 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 301 and MECH 340 with a grade of “C” or higher.  
 This course examines major manufacturing processes, their capabilities, analysis, economics and manufacturing process selection. Students perform both kinematic (the study of the motion of machinery without regard to forces) analysis and kinematic design of planar and spatial mechanisms, cams, and gear trains. Computer programming is used for iterative methods in both analysis and design. Specific methods and techniques taught and applied are operations strategy, product design and selection, supply chain management, total quality management, forecasting, capacity planning, facility location, facility layout, work system design, inventory management, material requirements planning, and scheduling.  
 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 202/204.

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

Prerequisite: 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. Development of equations of conservation of mass and momentum lead to development of aircraft performance and design parameters.

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 301.

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, unsymmetrical bending, Castigliano's theorem, statically indeterminate structures, thin walled pressure vessels, introduction to elasticity.

Lecture: 3 hours.

MECH 481 *Senior Design I* Two Credit Hours

Prerequisite: MECH 345; corequisite: 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: 1 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 his 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.

**SCHOOL  
OF  
HUMANITIES  
AND  
SOCIAL SCIENCES**

**Col. Winfred Bobo Moore, Jr., Dean**

**Department of Criminal Justice  
Lt. Col. Sean Griffin, Head**

**Department of English  
Col. David Gordon Allen, Head**

**Department of History  
Col. Katherine Haldane Grenier, 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. Steve A. Nida, Head**

# Department of Criminal Justice

Department Head: Griffin

Professors: Burton, Griffin, Jensen, McNamara

Assistant Professors: Fenoff, Norris, Zommer

The Department offers an academic major in criminal justice. This 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

NOTE: CRMJ 201 is the prerequisite for all criminal justice courses except CRMJ 202, CRMJ 330, CRMJ 331, CRMJ 332, and CRMJ 465. This prerequisite does not apply to those courses in the minor on Intelligence and Homeland Security.

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 Homeland Security
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
INTL 210	Homeland Security
INTL 310	Intelligence Collection Systems and Programs
INTL 311	US Intelligence Successes and Failures

*Cluster B* (3 courses, 9 credit hours): Choose three courses numbered 200 or above in any combination of the following disciplines: Anthropology, History, Political Science, Psychology, or Sociology. Additionally, CSCI 227 (Introduction to Cybersecurity for Non-Computer Science Majors) may be taken as a Cluster B course.

**Minor in African-American Studies**  
(Please refer to p. 114)

**Minor in Criminal Justice**  
(Please refer to p. 124)

**Minor in Cybersecurity**  
(Please refer to p. 126)

**Minor in Intelligence and Homeland Security**  
(Please refer to p. 132)

**Minor in International and Military Affairs**  
(Please refer to p. 133)

**Minor in International Criminal Justice  
(Please refer to p. 135)**

**Minor in Law and Legal Studies  
(Please refer to p. 138)**

**Minor in Non-Western Studies  
(Please refer to p. 142)**

**Criminal Justice Course Descriptions**

CRMJ 201 *Introduction to Criminal Justice* Three Credit Hours

Prerequisite for all criminal justice courses except CRMJ 202, CRMJ 330, CRMJ 331, CRMJ 332, CRMJ 465.

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 Homeland Security* Three Credit Hours

The term “homeland security” is a relatively recent addition to the policy and scholarly landscape. Having gained prominence after the terrorist attacks of 11 September 2001, the term is often assumed to be synonymous with the work of the US Department of Homeland Security (DHS) - itself a post-9/11 amalgamation of several federal agencies. The course critically reviews the rise of homeland security as a policy and scholarly concern after 9/11 and describes and explains homeland security policies, in the US and abroad, by considering their international attributes and by undertaking cross-national and cross-temporal analyses. The course is inter-disciplinary and draws on a range of fields within the social sciences. Students will be encouraged to integrate theory and evidence towards stronger analyses.

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 370 *Police Systems & Practices* Three Credit Hours

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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 caselaw. 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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201

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

Prerequisite: CRMJ 201 and 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 criminal justice may be investigated. Especially recommended for those considering graduate or professional study.

CRMJ 499 *Internship* Three Credit Hours

Prerequisite: CRMJ 201 and permission of director of internships.

Internships with government and other agencies are offered to combine academic training with professional experience.

### Intelligence Course Descriptions

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 be 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 310 *Intelligence Collection Systems and Programs* 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.)

### Sociology Course Descriptions

SOCI 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.

SOCI 202 *Social Problems* Three Credit Hours

Analysis of deviant behavior and those factors affecting the disorganization of small groups, complex organizations, and societies.

SOCI 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.

SOCI 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.

SOCI 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

Department Head: Allen

Professors: Allen, Book, Heuston, Hutchisson, Leonard, Lucas, Rhodes, Thompson

Associate Professors: Frame, Hansen, Hendriks, Horan, Livingston, Maxwell, Pillhuj

Instructors: Adair, Silverman

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.

### Major of English

The English major is designed for students seeking a broad education suitable for careers in such areas as law, business, the armed forces, teaching, medicine, or theology. In addition to a strong foundation in literature, the department offers a generous selection of elective courses that allows either a truly broad liberal arts education or an opportunity to take a number of courses within a secondary field.

The program within the English Department provides both depth and flexibility. Course offerings range from Anglo-Saxon literature to modern British, American, and world literature. Students may also take courses in creative writing, journalism, public speaking, 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 communication.

Since they are allowed to take as many as eight electives outside the department during their sophomore, junior, and senior years, students have ample latitude to follow other interests. During their freshman and sophomore years, they take core curriculum courses ensuring a background in a modern language, the sciences, mathematics, and the social sciences.

The student majoring in English is required to take the following courses:

English 211 (Mythology) or 212 (The Bible as Literature)

English 216 (Literary Theory)

English 303 or 304 (Shakespeare I or II)

English 301 (Chaucer) or 305 (Milton)

English 402 or 403 (Senior Seminar I or II)



English 411 (Legal Writing) or 413 (Advanced Composition)  
 English 499 (Internship in Professional Communication)  
 One English course numbered 310-324 (Early British Literature)  
 One English course numbered 325-336 (Later British Literature)  
 Two English courses numbered 338-351 (American Literature)  
 Four English courses numbered 301-499 (English Electives)  
 Philosophy 201 (Introduction to Philosophy)

For a tabulation of the requirements for the English major, see the Courses of Study section of this catalog.

**Minor in Fine Arts  
 (Please refer to p. 129)**

**Minor in Leadership Studies  
 (Please refer to p. 111)**

**Minor in Philosophy  
 (Please refer to p. 143)**

**English Course Descriptions**

Unless otherwise indicated in the course descriptions, all advanced English courses are open to all students who have completed their sophomore English requirements (ENGL 201 and ENGL 202/215/218/219), or who have the approval of the department head.

The courses in philosophy are included in the English curriculum under subject code PHIL.

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 readings in literature. Readings will include poetry and at least one of the other two major genres of imaginative literature (fiction and drama). 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

ENGL 201 is required of all sophomores other than English majors. ENGL 202 is one of four courses (the others are 215, 218, and 219) that can satisfy the second semester core requirement.

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 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.

ENGL 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.

ENGL 207 *Introduction to Journalism* Three Credit Hours

Prerequisite: ENGL 102

An introduction to print journalism with emphasis on writing news and feature articles.

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  
 Can be used to satisfy the second semester core requirement in English.  
 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  
 Can be used to satisfy the second semester core requirement in English.  
 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

Can be used to satisfy the second semester core requirement in English.

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 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* Three Credit Hours  
& ENGL 364 *Literature I, II, & III* 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 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. This course fulfills state teacher certification requirements for advanced composition.



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.

ENGL 499 *Internship in Professional Communication* Three Credit Hours

Prerequisite: Completion of either ENGL 411 or 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 301 *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.

### 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  
The theory of abstract principles and material techniques as applied in the evaluation of works of art. The employment of such theory in an introductory study of famous art works.
- FNAR 207 *Survey of Art History* Three Credit Hours  
An introduction to the art of China, Egypt, the Mediterranean under Rome, Byzantium, and Gothic Europe. Art works from Africa, India, and Japan will also be considered. Major works will be discussed in relation to their cultural and philosophical context and content.
- 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.

# Department of History

Department Head: Grenier

Professors: Cox, Grenier, Knapp, Moore, Neulander, Preston, Sinisi

Associate Professors: Boughan, Mushal, Renouard, Taylor, Wright

Assistant Professors: Aguirre, Johstono, Maddox

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 (Renaissance and Reformation), HIST 324 (The French Revolution and Napoleon), HIST 325 (Europe, 1815-1914), HIST 326 (Europe since 1914), HIST 327 (England to 1660), HIST 328 (England Since 1660), HIST 329 (The Ancient Greeks), HIST 330 (The Romans), HIST 331 (The Byzantine Empire), HIST 332 (History of Modern Russia), 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 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 War for Southern Independence), 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 (America and the Sea), 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).

*Group IV. Military and Diplomatic.* HIST 380 (World War I), HIST 381 (History of Naval Warfare), HIST 382 (Great Captains), HIST 383 (Patterns of War to 1763), HIST 384 (U.S. Military History), HIST 385 (World War II), HIST 387 (History of the Vietnam War), HIST 388 (U.S. Foreign Relations since 1898), HIST 389 (The Global Cold War, 1917-1991), and HIST 391 (Special Topics in Military History).

*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; and nine hours of political science (PSCI prefix) in 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. 114)

**Minor in History**  
(Please refer to p. 131)

**Minor in International Relations**  
(Please refer to p. 136)

**Minor in Leadership Studies**  
(Please refer to p. 111)

**Minor in Southern Studies**  
(Please refer to p.146)

**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.

An introduction to the history of the research and writing of history as a craft. According to the particular professor instructing, the course will address theories of history, computer simulation, the use of diaries, memoirs, and government documents, as well as the use of historic sites, architecture, photographs, paintings, cinema, and literary fiction as evidence in reconstructing and interpreting historical events.

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 *Disunion and the War for Southern Independence* 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 a *Department of History* nd 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 *America and the Sea* Three Credit Hours

This course examines the significant impact of the sea on the development of the United States from the age of European exploration to the present. Class topics will include trade and commerce, maritime communities, the fisheries industry, piracy and privateering, the merchant marine, maritime technology, the slave trade and immigration, and the role of the Coast Guard, Navy and Marine Corps in national security. Special emphasis will be given to the port of Charleston with guest speakers and field trips to highlight current issues in maritime affairs. By the end of the course, students will be familiar with the important persons, events and ideas that shaped America's maritime history.

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.



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 331 (423) *The Byzantine Empire* Three Credit Hours

The course begins with the turn of the Roman Empire to Christianity in the 4th century, then traces how the new religion changed the nature of the Empire. The course covers the conquests of the Germans over its western territories and the Muslims over its southern parts during the early Middle Ages. The fortunes of the remaining "Byzantine Empire" are followed through its revival, and then its decline with the Crusades and its final destruction by the Ottoman Turks.

HIST 332 (424) *History of Modern Russia* Three Credit Hours

History of the development of tsarist absolutism under the Romanov dynasty and of the religious, social, and economic institutions of the tsarist state. Intensive treatment of the 1917 Revolution and the institutional development of the Soviet state to world power status.

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 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: Muhammed 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 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 381 (479) *History of Naval Warfare* Three Credit Hours

A history of warfare at sea from ancient times to the present with emphasis on the historical development of naval architecture, technology and organization; the evolution of naval tactics and strategy, and the influence of seapower upon world affairs.

HIST 382 (483) *Great Captains* Three Credit Hours

An analytical and interpretative study of the character, styles of command, and achievements of the more influential commanders in the history of warfare from Alexander the Great to Rommel. Particular attention is given to the contributions of these historical figures, to their role in the development of the concept of command and strategic formulation in the Western world, and to the relationship of military to political leadership.

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 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  
formerly GEOG 109.

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 Modern Languages, Literatures and Cultures

Department Head: Toubiana

Professors: Andrade, Bahk, Skow, Toubiana

Associate Professors: Fernández-Medina, Segle, Urroz

Assistant Professors: Emm, Hellin Garcia, Roca-Martinez, Smith, Strobbe, Woo

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 School of Education for the Internship in Teaching as outlined on page 165.

## Plan of Undergraduate Major

Thirty-three 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.

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. 122)**

**The Minor in East Asian Studies  
(Please refer to p. 126)**

**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.

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

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

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

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 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

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

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

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

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

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

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.



GERM 304 *Postwar German Society and Culture* Three Credit Hours  
 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

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 included 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

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

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. Sp *Department of Modern Languages, Literatures and Cultures* special projects tailored to student need and interest.



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

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

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  
 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  
 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 307 *Business Spanish* Three Credit Hours  
 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  
 An extensive overview and practice of written commercial communications in Spanish.
- SPAN 309 *Spanish for Law Enforcement* Three Credit Hours  
 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  
 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  
 Trends in Spanish poetry since 1900.
- SPAN 450 *Undergraduate Seminar: Studies in Special Topics* Three Credit Hours  
 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: 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: Feurtado, Hines, Kapeluck, Mays

Associate Professors: Buchanan, Porter, Tenney

Assistant Professors: Segrest

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 criminal justice, history, and economics courses (with the exact mix depending on the subfield the student selects). In addition, it provides for six 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 departmental elective (any course with a PSCI or ANTH prefix), 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

**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

**SENIOR YEAR**

**First Semester**

Pol. Issues & Public Policy, PSCI 401  
 Subfield Elective  
 Constitutional Law, PSCI 462  
 Elective  
 Elective  
 ROTC  
 LDRS 411

**Second Semester**

Subfield Elective  
 Departmental Elective  
 Political Science Elective  
 Elective  
 Elective  
 ROTC

*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

- 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

**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
- Departmental 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 two subfield electives chosen from the following, one of which must be an area course):

- PSCI 310 Domestic Terrorism
- PSCI 311 The Civil Rights Movement and American Politics
- 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

### **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

##### **Second Semester**

Constitutional Law, PSCI 461  
Pre-Law & Legal Studies Elective  
Departmental Elective  
Elective



Elective  
ROTC  
LDRS 411

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  
SOCJ 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

**Minor in African-American Studies  
(Please refer to p. 114)**

**Minor in American Politics: Democracy and the Political Process  
(Please refer to p. 115)**

**Minor in East Asian Studies  
(Please refer to p. 126)**

**Minor in International and Military Affairs  
(Please refer to p. 133)**

**Minor in International Criminal Justice  
(Please refer to p. 135)**

**Minor in Law and Legal Studies  
(Please refer to p. 138)**

**Minor in Leadership Studies  
(Please refer to p. 111)**

**Minor in Non-Western Studies  
(Please refer to p. 142)**

**Minor in Southern Studies  
(Please refer to p. 146)**

**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

Acting Department Head: Politano

Professors: Johnson, Lassiter, Lipovsky, Matthews, Nida, Politano, Saylor

Associate Professors: Fernald, Hanchon, Sawyer, Taylor

Assistant Professors: Greenlee, Macdonald

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 which would support graduate study in any of the specialty areas of psychology. They also should be well prepared for employment in positions which 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 program in psychology, which leads to the Bachelor of Arts degree, consists of 41 hours of course work in psychology, including PSYC 201, PSYC 202, PSYC 203, PSYC 301, PSYC 302, PSYC 304, PSYC 305, PSYC 306, PSYC 310, PSYC 403, PSYC 402, PSYC 405, and PSYC 410. To obtain a departmental recommendation for graduate study, the psychology major should also take PSYC 420. The department also offers elective courses to majors in other academic disciplines.

The Department of Psychology offers two 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 Leadership Studies**  
(Please refer to p. 111)

**Minor in Psychology**  
(Please refer to p. 145)

**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     *Research Design in Psychology*     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 301     *Experimental Psychology:  
Methodology and Programming*     Four Credit Hours

Prerequisites: 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 communication.

PSYC 302     *Physiological Psychology*     Four Credit Hours

Prerequisite: PSYC 201

This course introduces students to the biological bases of behavior through classic didactics, laboratory experiences, and exemplary readings in physiological experimentation. Students will develop and demonstrate a range of research skills.

PSYC 304 *Abnormal Psychology* Three Credit Hours

Prerequisite: PSYC 201

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 201

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 201

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 201

This course surveys the theoretical and empirical work in the area of cognitive psychology. Topics include pattern recognition, attention, memory, problem solving, and comprehension. Students will become familiar with models of cognition through didactics and experiential exercises.

PSYC 403 *Psychology of Learning* Three Credit Hours

Prerequisite: PSYC 201

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 201

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 *Advanced Psychological Study* 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.

The curriculum for the psychology major is based on a classic liberal education model in the field. 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. Non-majors who have at least surveyed the field and who have been introduced to the social scientific process through PSYC 201 may also round out their curriculum with this course as a non-departmental elective.

**SCHOOL  
OF  
SCIENCE  
AND  
MATHEMATICS**

**COL Lok C. Lew Yan Voon, Dean**

**Department of Biology  
COL John E. Weinstein, Head**

**Department of Chemistry  
COL Holly Bevsek, Head**

**Department of Health, Exercise and Sport Science  
COL Harry D. Davakos, Head**

**Department of Mathematics  
and  
Computer Science  
COL Mei-Qin Chen, Head**

**Department of Physics  
COL Joel C. Berlinghieri, Head**

## Department of Biology

Department Head: Weinstein

Professors: Gustafson, Rosenblum, Weinstein, Zardus

Associate Professors: Donnell; Gramling, J.; Johnson; Nolan; Zanin,

Assistant Professor: Rocha

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 major is designed to provide students with a broad background in modern biology that will prepare them for employment or further study in graduate or professional schools. 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), Genetics (BIOL 308), Ecology (BIOL 406), and Senior Seminar (BIOL 411). Students must take five additional biology electives. One must be chosen from each of the following course groupings:

#### **Cell and Molecular Biology Courses:**

- BIOL 310 Microbiology
- BIOL 401 Developmental Biology
- BIOL 402 Descriptive Histology
- BIOL 424 Molecular Genetics
- BIOL 427 Immunology

#### **Ecology and Field Biology Courses:**

- BIOL 209 Environmental Science
- 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 208 Evolution
- 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

**One additional biology elective is required. This course can be chosen from the courses above as well as:**

- BIOL 320 Intern Research
- BIOL 322 History of Biology
- BIOL 412 Special Topics in Biology
- CHEM 409 Biochemistry I

**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), 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 four areas below.

**Animal Physiology Area**

- BIOL 403 Mammalian Physiology
- BIOL 414 Environmental Physiology

**Animal Behavior and Evolution Area**

- BIOL 208 Evolution
- BIOL 307 Animal Behavior

**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	Teaching Students with Special Needs
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. 118)**

### **Minor in Molecular Biology and Biochemistry (Please refer to p. 141)**

### **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 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

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

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 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 310 *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 314 *The Vascular Flora of South Carolina* Four Credit Hours  
 Prerequisite: BIOL 140/141 or approval of instructor.

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 317 *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 327 is optional.

BIOL 318 *Human Anatomy and Physiology II* Three Credit Hours

Prerequisite: BIOL 317

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 328 is optional.

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 Citadel, 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 322 *History of Biology* Three Credit Hours

Prerequisite: BIOL 140/141 or permission of the instructor.

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 327 *Human Anatomy and Physiology I Lab* One Credit Hour

Prerequisite: BIOL 101/111

Corequisites or prerequisites: BIOL 317

Does not count toward biology major.

Laboratory exercises designed to illustrate and support lecture content of BIOL 317.

Laboratory: two hours.

BIOL 328 *Human Anatomy and Physiology II Lab* One Credit Hour

Prerequisite: BIOL 317

Corequisites or prerequisites: BIOL 318

Does not count toward biology major.

Laboratory exercises designed to illustrate and support lecture content of BIOL 318.

Laboratory: two hours.



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 401      *Developmental Biology*      Four Credit Hours

Prerequisites 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 406

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 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 140/141 or approval of instructor.

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 318

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 310 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, spelunking 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: Blanton, Mabrouk, Zuraw

Associate Professors: Bevsek, McAfee

Assistant Professors: Adair, Dorko, Hunter

Instructor: Hemingway

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, 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 B.S. in Chemistry program must also take another approved elective from the following selection: BIOL 308, 310, 421, 424, 427; CHEM 402, 404, 410; MATH 303, 335, 343, 344, 381, 403, 411, 422, 470; PHYS 301, 307, 308, 315, 320, 323, 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 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 308, 310, 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 permits 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 four chemical areas:

Analytical Chemistry:	CHEM 300, CHEM 302
Physical Chemistry:	CHEM 305/315, CHEM 306/316
Inorganic Chemistry:	CHEM 401, CHEM 402
Biochemistry:	CHEM 409, CHEM 410

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 as outlined on page 247. 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 306	Teaching Reading and Writing in the Middle and High School
EDUC 312	Teaching Students with Special Needs
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 - Biochemistry Specialization 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. 121)

**Minor in Molecular Biology and Biochemistry**  
(Please refer to p. 141)

**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 ecology, to the human body, to energy productions, 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 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 spectrophotometer, 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 and CHEM 162 and MATH 107 or the equivalent or permission of the instructor.

Required of all juniors majoring 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 majoring 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; and PHYS 204/254 or PHYS 222/272; CHEM 152, CHEM 164 or permission of department head.

Corequisite for CHEM 305: CHEM 315 (except biochemistry specialty majors)

Corequisite for CHEM 306: CHEM 316

Required of all juniors getting the BS degree in chemistry; elective to others.

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; 1 semester 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, use of computers in handling 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.

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

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, CHEM 305, and CHEM 315

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 151/161; 152/162; 207/217; 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, Exercise, and Sport Science

Department Head: Davakos

Professors: Davakos

Associate Professors: Garner, Williams

Assistant Professors: Bott, Bornstein, Imam, Richardson, Sole

Instructor: Bogle, Hittinger

The purpose of the Department of Health, Exercise, and Sport Science is to provide an exemplary educational environment and experiences leading to acquisition of skills, knowledge, and dispositions within the domains 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 Physical Education Program

The RPED 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.

### **HEALTH, EXERCISE, AND SPORT SCIENCE MAJORS**

The purpose of the professional preparation program is to prepare undergraduate students for selected involvement within the broad fields of health, exercise and sport science 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 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, Exercise, and Sport Science 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 317	Human Anatomy and Physiology I	3
BIOL 318	Human Anatomy and Physiology II	3
HLED 400	First Aid/Emergency Care	3
HLED 407	Methods of Teaching School Health Education	<u>3</u>
		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.

### **Health, Exercise, and Sport Science**

Alternatives to teaching physical education are available through two professional specialty areas: Exercise Science and Sport Management.

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 domains for human movement and healthful living. Competence within each of 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 professional curriculum which includes four (4) of the following approved elective courses:

BIOL 102	General Biology II
BIOL 209	Environmental Science
BIOL 308	Genetics
BIOL 310	Microbiology
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
CSCI 110	Microcomputer Applications
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	Senior 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

**Minor in Health  
(Please refer to p. 130)**

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 three (3) of the following courses as approved electives.

BADM 201	Principles of Macroeconomics
BADM 212	Introduction to Managerial Accounting
BADM 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
PESM 302	Sport Communications
PHED 408	Introduction to Sport Psychology
PHED 411	Special Topics in Health, Exercise, and Sport Science
PHED 420	Senior Research Project

**Minor in Sport Management  
(Please refer to p. 148)**

**Health, Exercise, and Sport Science Course Descriptions**

EXSC 200 *Motor Development* 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 317, BIOL 318

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, 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, Exercise & Sport Science 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, 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, Exercise, Sport Science, and Physical Education* 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 200 *Motor Development* Three Credit Hours

Instruction will focus on 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

PHED 201 *Introduction to Teaching Physical Education* Three Credit Hours

This course is designed to discuss theories of instruction in physical education settings including environmental arrangements, developing objectives, task presentation, content development, and feedback. Practical applications of these principles to small peer group settings using open and closed gross motor skills will be included. **A 5-hour field experience is required for this course. Teacher candidates are required to take PHED 201—Introduction to Teaching Physical Education prior to taking other methods courses.**

Lecture: three hours

PHED 203 *Accommodating Persons with Disabilities Within Sport and Physical Activity* 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 field experience component of a minimum of 10 hours is required.

Lecture: three hours

PHED 235 *Motor Learning* Three Credit Hours

Prerequisites: PHED 101, PHED 200, or department head approval.

Instruction will focus on principles of motor learning, with implications for learning gross motor skills, processes underlying skilled performance, how skilled performances are learned and how to apply principles of skilled performance and learning to instructional settings. A field experience component of a minimum of 5 hours is required.

Lecture: three hours

PHED 300 *Technology in Health, Exercise, Sport Science and Physical Education* Three Credit Hours

Prerequisite: HESS majors only or permission of professor.

Technology impacts health, exercise, sport, and physical education in so many aspects making it important to more clearly recognize its current and potential roles. Through use of the internet, lecture/demonstrations and hands-on experiences, students will use and evaluate a variety of software, shareware, freeware, professional links, and other related information pertaining to technology integration. A field experience component of a minimum of 5 hours is required.

Lecture: three hours

PHED 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

PHED 321 *Methods of Teaching Rhythmic Activities* Three Credit Hours

Prerequisite: Admission to Physical Education Teaching Program; PHED 201

This course teaches content and prepares students in teaching methodologies for fundamental rhythmic activities and movement education in grades K-12, including basic locomotor skills, creative rhythmic activities, dances (traditional, folk, square, social, line), and aerobics. Additional emphasis is placed on candidate skill development in dance and basic gymnastics. A field experience component of a minimum of 10 hours is required.

Lecture: three hours

PHED 335 *Health and Physical Education Curriculum* Three Credit Hours

Prerequisite: Admission to Physical Education Teaching Program

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 evaluations and current issues and trends in health, movement, and physical fitness for elementary/middle/secondary school learners from various backgrounds is conducted. A field experience component of a minimum of 5 hours is required.

Lecture: three hours

PHED 350 *Methods of Teaching Individual and Dual Sports* Three Credit Hours

Prerequisite: Admission to Physical Education Teaching Program

The course emphasizes methods of teaching and/or coaching individual and dual sports. Included are examination of theoretical and practical knowledge and applications for both individual and dual sports, with additional emphasis on the most popular sports in American society. Individual and dual sports are further divided into indoor and outdoor sports. A field experience component of a minimum of 10 hours is required.

Lecture: three hours

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. Taking Praxis II is a requirement for this course  
A field experience component of a minimum of 15 hours is required.  
Lecture: three hours
- PHED 460 *Methods of Teaching Team Sports* Three Credit Hours  
Prerequisite: Admission to Physical Education Teaching Program  
The course emphasizes methods of teaching and/or coaching team sports. Included are examination of theoretical and practical knowledge and applications for team sports, with additional emphasis on the most popular sports in American society. Team sports are further divided into outdoor and indoor sports. A field experience component of a minimum of 10 hours is required.  
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 400 *First Aid and Emergency Care* Three Credit Hours

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 *Methods of Teaching School Health Education* Three Credit Hours  
Prerequisite: Admission to Physical Education Teaching or Teacher Education Program; RPED 250 and 251  
A course designed to prepare students to teach the health education curriculum in K-12 schools. Assessment techniques for standards will also be addressed. The course is designed for any education major. A field experience component of a minimum of 5 hours is required.  
Lecture: three hours

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**

PESM 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

PESM 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

PESM 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

PESM 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

PESM 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 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: Chen, Groetsch, Moore, Trautman

Associate Professors: Banik, Rudolph, Zhang

Assistant Professors: Florez, Joshi, Mukherjee, Robinson, Swart,  
Verdicchio, Wittman

Instructors: Cotter

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 361, 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; 17 hours of core mathematics and statistics: MATH 131, MATH 132, MATH 206, MATH 240, STAT 361; 40 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. 116)

**Minor in Applied Statistics**  
(Please refer to p. 118)

**Minor in Computer Programming**  
(Please refer to p. 124)

**Minor in Cybersecurity**  
(Please refer to p. 126)

**Minor in Management Information Systems**  
(Please refer to p. 139)

### 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, Algebra and Trigonometry, 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 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, and power series.

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: Two semesters of calculus and either MATH 240 or MATH 234

The theory and applications of deterministic models of operations research. Topics include linear programming and the simplex algorithm, transportation and assignment problems, game theory, graphs and network flows, dynamic programming, and sensitivity analysis.

MATH 382 *Probabilistic Methods of Operations Research* Three Credit Hours

Prerequisites: Two semesters of calculus and one semester of statistics

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, 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 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 data collection, descriptive statistics, measures of central tendency and dispersion, normal and binomial distributions, hypothesis testing, correlation and linear regression. Emphasis will be placed on understanding statistical concepts, experimental design, and interpretation of statistical results. A statistical package will be introduced.

STAT 361     *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, measures of central tendency and dispersion, probability rules, probability distributions, sampling distributions, hypothesis testing, analysis of variance, correlation, and regression. A statistical package will be introduced.

STAT 366     *Applied Statistics*     Three Credit Hours  
Prerequisite: STAT 361 or BADM 205

A course in applied statistics covering practical statistical methods. Topics include comparisons of populations, methods of testing the independence of two variables, statistical methods of verifying or rejecting distributional assumptions, analysis of variance, simple linear regression, and certain nonparametric procedures. Students will obtain experience with statistical packages.

STAT 461     *Data Analysis*     Three Credit Hours  
Prerequisite: Previous statistics course

An introduction to graphical and exploratory analysis of data with extensive use of familiar statistical packages such as MINITAB. Topics include analysis of variance, two-way designs with interaction, multiple regression models, and basic nonparametric procedures.

### **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*      Four 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.

Lecture: Three hours; laboratory: two hours.

CSCI 205      *Programming for Non-Majors*      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 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 *Introduction to Cybersecurity for Non-Computer Science Majors* 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

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 202 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 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.

# Department of Physics

Department Head: Berlinghieri

Professors: Adelman, Berlinghieri, Lew Yan Voon

Associate Professors: Briggs, Hilleke, Sollitt, Yost

Assistant Professors: Clark

Physics is the fundamental physical science, the foundation upon which all other physical sciences are constructed. It is a vast and comprehensive discipline which studies the entire realm of nature from the most minute particles, distances, and times imaginable to the most massive stars, the outer limits of the universe, and the eons of duration. It is particularly concerned with those aspects of nature which can be formulated in terms of principles and laws reduced to their essence and expressed in an elegant and concise mathematical form.

The Department of Physics at The Citadel provides a comprehensive curriculum leading to a Bachelor of Science degree in Physics as well as undergraduate education in basic physics through calculus-based and non-calculus based introductory sequences. In addition, some specialized graduate courses are available to support those pursuing advanced degrees in education.

The department sponsors a section of the Society of Physics Students and the physics honor society Sigma Pi Sigma to provide fellowship for physics majors and other students of similar interests and to make available extracurricular activities which illustrate that physics in practice is a vital and active discipline.

*I. Bachelor of Science degree in Physics.* This degree is designed to offer students a thorough education in physics at the undergraduate level and to prepare them to pursue graduate study in physics as appropriate to their career aspirations. Professional physicists have traditionally experienced careers in education, industry and government, but a sound knowledge of basic physics has become increasingly important to other areas of endeavor as well. For example, a strong undergraduate background in physics is considered essential to a career as a commissioned officer in one of the high-technology branches of the Armed Forces. The curriculum for the B.S. degree in physics is comprehensive and includes 56 semester hours of physics, beginning with a one-semester introduction to physics course followed by a three-semester basic course in physics for engineers and physical scientists, a calculus-based sequence which emphasizes fundamental principles and problem solving, and which also includes a weekly two-hour laboratory each semester. The sophomore, junior and senior years include upper-division courses in analytical mechanics, electricity and magnetism, mathematical physics, electronics, thermodynamics,

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 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 who do not intend to continue their education on the graduate level or to pursue careers in medicine; 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 natural 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 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. 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. 113)

**Minor in Applied Physics**  
(Please refer to p. 117)



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.

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 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 Hour

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 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.



# Department of Leadership Studies

Department Head: Dean  
Associate Professor: Dean

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. The program utilizes interdisciplinary courses to engage students in broad learning about leadership in applied contexts. At various points, the 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), to include the Sophomore Seminar in Principled Leadership, required of all cadets. A Minor in Leadership Studies is offered to address learning, scholarship, and critical thinking about leadership from various analytical perspectives and, as a result, to give students a broad understanding of the nature of effective leadership. This minor complements the “leadership laboratory” aspect of cadet life at The Citadel.

## **Minor in Leadership Studies (Please refer to p. 111)**

### **Leadership Course Descriptions**

LDRS 201     *Sophomore Seminar in Principled Leadership*     One Credit Hour

Required of all second-year cadets, this course focuses on 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 a focus on 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.



# Department of Aerospace Studies

Department Head: Hall

Professor: Hall

Assistant Professors: Concepcion, Dommert, Jones, Segarra

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	<i>Foundations of the U.S. Air Force I</i> (Fall Semester—Fourth Class Year)	One Credit Hour
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This course and its follow-on provide 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 ROTC as well as the customs and courtesies and dress and appearance standards expected of Air Force officers. It continues with a discussion of Air Force heritage, the organization of the Air Force and how the Air Force contributes to the accomplishment of our national security objectives. The course concludes with an overview of Air Force career opportunities and benefits. Leadership Laboratory is mandatory for AFROTC contract/pursuing cadets and complements this course by providing cadets with followership experiences.

Lecture: one hour

Lab: two hours (contract or cadets pursuing contracts only)





AERO 301     *Air Force Leadership Studies I*     Three Credit Hours  
(Fall Semester—Second Class Year)

*Air Force Leadership Studies I* is a study of leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and the communication skills required of an Air Force junior officer. 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. A mandatory Leadership Laboratory (pursuing/contracted only) complements 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 skills. Students are required to research leadership topics and provide oral and written presentations of military and current events.

Lecture: three hours

Lab: two hours (contract or cadets pursuing contracts)

AERO 302     *Air Force Leadership Studies II*     Three Credit Hours  
(Spring Semester—Second Class Year)

*Air Force Leadership Studies II* is the study of military ethics with a focus on Air Force leadership, accountability, professional and unprofessional relationships and followership. Individuals are required to comprehend selected individual leadership skills and personal strengths and weaknesses as applied in an Air Force environment. Cadets should also comprehend and apply the concepts of ethical behavior as well as comprehend the selected concepts, principles, and theories of Air Force leadership, management and followership. Cadets will use team building and case study analysis to apply leadership principles to real life scenarios. Students are required to research leadership topics and provide oral and written presentations of military and current events. A mandatory Leadership Laboratory complements this course for pursuing/contracted cadets.

Lecture: three hours

Lab: two hours (contract or cadets pursuing contracts)

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, Field 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: Raschke

Professor: Raschke

Assistant Professors: Bell, Caballero, Felton, Heineman, Ionabreton, McKen, Ryan, Sposito

Instructors: Austin, Burkheart, Catka, Fontenot, Friedman, Gray, Roberts, Sarver

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 the 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 (CLTL) 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 to the reserve components. Over 50 cadets’ participate in these programs each year with a 98% graduation and commissioning rate.

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. Between the freshmen and sophomore year cadets will attend the Cadet Initial Entry Training (CIET) course at Ft. Knox, Kentucky. This a four week program basic instruction program designed to reinforce skills learned between the classroom and laboratory. 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.

The first year of the advanced Course (Military Science III) is primarily designed to prepare contracted cadets for their performance and evaluation at the Cadet Leadership Camp (CLC), 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 CLC at Ft. Knox, Kentucky. CLC is based upon performance-oriented training and continuous leadership potential evaluation. Each cadet's CLC 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.

After his or her sophomore year, a transfer into Army ROTC from another ROTC program at The Citadel will only be permitted by the course instructors, if the transferring student intends to pursue an Army commission and demonstrates by action that intent.

Cadets seeking commissions as Second Lieutenants in the United States Army are required to successfully complete the Enhanced Skills Training Program (ESTP), one of ten designated military history courses, and CIET, CLC, and ROTC Advanced Course 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 CIET. Scholarship cadets will register for MLTY 450, Army lab in conjunction with their Army course.

MLTY 102 *Foundations in Leadership* 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 CIET. Scholarship cadets will register for MLTY 450, Army lab in conjunction with their Army course.

MLTY 201 *Innovative Tactical Leadership* Two Credit Hours

This course was designed to be conducted in an interactive manner with ample opportunities for small group discussions and practical exercises; with the emphasis of learning being based on a student-centric design and is facilitated by the instructor. You must properly conduct your pre-class assignments in order to come to class with a foundation of knowledge on the subject taught by your instructor that day. Doing so will allow your instructor to spend the majority of the class discussing their experience and knowledge on the subject. As a cadet attending this course, it is everyone's responsibility for contributing to the class enhancing the overall learning experience. Scholarship, contracted, and seriously pursuing cadets will register for MLTY 450, Army lab in conjunction with their Army course.

MLTY 202 *Leadership in Changing Environments* Two Credit Hours

This course was designed to be conducted in an interactive manner with ample opportunities for small group discussions and practical exercises; with the emphasis of learning being based on a student-centric design and is facilitated by the instructor. You must properly conduct your pre-class assignments in order to come to class with a foundation of knowledge on the subject taught by your instructor that day. Doing so will allow your instructor to spend the majority of the class discussing their experience and knowledge on the subject. As a cadet attending this course, it is everyone's responsibility for contributing to the class enhancing the overall learning experience. Scholarship, contracted, and seriously pursuing cadets will register for MLTY 450, Army lab in conjunction with their Army course.

MLTY 301      *Adaptive Team Leadership*      Three Credit Hours

The Advanced Course lab is designed to build off basic programs (MSL 101, 102, 201, and 202) being progressive and sequential. Students are required to apply their knowledge outside the classroom during leadership labs and situational exercises in a field environment by using critical thinking, team building skills, and basic leader skills to accomplish missions. Cadets enrolling in sections 01, 03, and 05 will need to be simultaneously enroll in MLTY 450. Cadets enrolling in 02, 04, and 06 do not need to enroll in the laboratory course to be enrolled. Scholarship, contracted, and seriously pursuing cadets will register for MLTY 450, Army lab in conjunction with their Army course.

MLTY 302      *Leadership Under Fire*      Two Credit Hours

The Advanced Course lab is designed to build off basic programs being progressive and sequential. Students are required to apply their knowledge outside the classroom during leadership labs and situational exercises in a field environment by using critical thinking, team building skills, and basic leader skills to accomplish missions. Cadets will receive in depth preparation for Cadet Leadership Camp which they will attend over the summer at Ft. Knox, Kentucky. Cadets enrolling in sections 01, 03, and 05 will need to be simultaneously enroll in MLTY 450. Cadets enrolling in 02, 04, and 06 do not need to enroll in the laboratory course to be enrolled. Scholarship, contracted, and seriously pursuing cadets will register for MLTY 450, Army lab in conjunction with their Army course.

MLTY 401      *Command and the Army Profession*      Three Credit Hours

Command and the Army Profession 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. Cadets enrolling in sections 01, 03, 05, 06 will need to be simultaneously enrolled in MLTY 450. Cadets enrolling in 02, 04, and 07 do not need to enroll in the laboratory course to be enrolled. Scholarship and contracted cadets will register for MLTY 450, Army lab in conjunction with their Army course.

MLTY 402      *Mission Command and the Company Grade Officer*      Two Credit Hours

Mission Command and the Company Grade Officer explores the dynamics of leading in the complex situations during Unified Land Operations, examine the Art of Command, how to properly communicate with your NCOs and Soldiers, and Developing Others (counseling). Additionally cadets will develop and 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. Cadets enrolling in sections 01, 03, 05, 06 will need to be simultaneously enrolled in MLTY 450. Cadets enrolling in 02, 04, and 07 do not need to enroll in the laboratory course to be enrolled. Scholarship and contracted cadets will register for MLTY 450, Army lab in conjunction with their Army course.

MLTY 450      *Army Contract Training Laboratory*      0 Credit Hours

This laboratory course is required for all scholarship and contracted cadets and open for cadets who are actively pursuing an Army contract. This Laboratory includes two Leadership Training Exercises a semester; during which cadets will learn leadership responsibilities at platoon and company level, 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.

# Department of Naval Science

Department Head: Schuehle

Professor: Schuehle

Associate Professor: Bryant

Assistant Navy Professors: Koury, McCartney, Moody, Turnwall, Tye, Zeiler

Assistant Marine Corps Professors: Boyd, McGrath

Instructor: Webber

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 Amphibious 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 student initial exposure to many elements of naval culture. Also provides conceptual framework/working vocabulary for 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 *Amphibious Warfare* Three Credit Hours

Introduces students to the fundamental terms, concepts, and theories of general warfare and amphibious warfare. These terms, concepts, and theories will be applied through a historical analysis of amphibious operations, identifying the evolution of amphibious doctrine, tactics, and technology. Focuses on the evolution of the U.S. Marine Corps into a specialized amphibious force, with particular attention devoted to the structure and capabilities of the present day U.S. Marine Corps as a forward deployed and rapid deployment force and the development of Expeditionary Maneuver Warfare concepts. (Marine Corps faculty)

NAVL 403 *Naval Leadership and Ethics* Two Credit Hours

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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*Director, Cadet Store*

## Faculty

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*B.S., The Citadel; M.A., Golden Gate University; graduate of the Air Force Command and Staff College, the U.S. Army Command and General Staff College and the U.S. Army War College; studied at the John F. Kennedy School of Government and the Harvard Graduate School of Education*  
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