# 1969 Southern Illinois University Bulletin Edwardsville Campus (Schedule for Late Afternoon, Evening, and Saturday Classes; Winter) 

Southern Illinois University Carbondale

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# Southern Illinois University 

## Bulletin

Schedule for Late Afternoon, Evening, and Saturday Classes, Edwardsuille Campus, Winter Quarter, 1969

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# University Calendar, 1968-1969 

Fall Quarter, 1968

New Student Week<br>Saturday-Monday,<br>September 21-23<br>Quarter Begins<br>Tuesday, September 24<br>(Classes 4:30 P.M. or later)<br>Tuesday 10 p.m.-<br>Thanksgiving Vacation<br>Tuesday, 8 a.m., November 26-December 3<br>Final Examinations<br>Wednesday-Tuesday,<br>December 11-17

Winter Quarter, 1969

| Quarter Begins | Thursday, January 2 |
| :--- | ---: |
| Final Examinations | (Classes $4: 30$ p.M. or later) |
|  | Thursday-Wednesday, |
| March 13-19 |  |

Spring Quarter, 1969
Quarter Begins
Wednesday, March 26
(Classes 4:30 P.m. or later)
Friday, May 30
Memorial Day Holiday
Final Examinations Wednesday-Tuesday, June 4-10
Commencement (Edwardsville) Tuesday, June 10 Commencement (Carbondale) Wednesday, June 11

## Registration Calendars

## Winter Quarter, 1969

## EDWARDSVILLE CAMPUS

Registration will be held in the Enrollment Office, 1302 Peck Classroom Building.

Oct. 7-Jan. 2 General Studies Advisement, by appointment (call General Studies Office).
Nov. 18-30 Registration, by appointment. Mon.Fri. 8:30 A.m. $-4: 30$ р.м.; Sat. 8:30 A.m.-12:00 noon. Additional hours Nov. 19, 20, 26, 27, 4:30-7:00 p.m.
Nov. 28
Dec. 6-14

Jan. 2 Thanksgiving, no registration.
Open registration. Mon.-Fri. 8:30 А.м. $-4: 00$ р.м.; Sat. 8:00 A.м. $-12: 00$ noon. Additional hours Dec. 9, 10, 11, 4:30-7:00 Р.м.
Central registration. 8:00 A.м. $-7: 00$ р.м.

## ALTON CENTER

Registration will be held in the Student Union.

Dec. 5
Dec. 23

Open registration. 8:30 A.M.-7:00 p.m. Central registration. 8:30 A.m.-6:30 Р.м.

## EAST ST. LOUIS CENTER

Dec. 4
Dec. 30

Open registration. 8:30 A.m.-7:00 P.м. Central registration. 8:30 A.M.-6:30 P.M.

## ALL LOCATIONS

Jan. 2
Jan. 3
Jan. 8
Jan. 15
Jan. 29
Feb. 26

Evening classes (4:30 p.м. or later) begin.
Day classes begin.
Last day to add a class.
Last day to be eligible for a refund of fees.
Last day to withdraw from a class without receiving a grade.
Last day to withdraw from school or a class.

## General: Information

this bulletin contains the schedule of classes to be offered at the Edwardsville Campus and the Alton and East St. Louis centers in the late afternoon, evening, or on Saturday for the winter quarter of the 1968-69 school year. It also provides information relative to advisement and registration, fees, and allied information.

The Edwardsville Campus provides a full schedule of class offerings for day and evening students. Freshman and sophomore courses are scheduled for day and evening students at the Alton and East St. Louis centers.

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GUARANTEED CENTER
SCHEDULES
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A program of Guaranteed Schedules for the centers has been established. Certain courses and sections at the centers are guaranteed for schedules extending through the fall, winter, and spring quarters. These classes will not be cancelled; they are coordinated to offer a variety of full-time academic programs for the incoming freshman as a day student, and they permit efficient progress for the new freshman evening student.

Classes at the centers marked with a $\star$ in the schedule are part of this program. For details concerning the full year's schedules, see the separate brochure for each center.

## A D M ISSION

Inquiries concerning admission to Southern Illinois University should be directed to the Admissions Office at Edwardsville. Applications for admission are accepted at any time during the calendar year but should be initiated at least 30 days prior to the start of the quarter which the student plans to attend.

A student must be officially admitted to the University before registration for classes will be permitted. Students who have not completed the admission requirements by the first day of the quarter will not be permitted to register. A student, to be permitted to attend classes at Southern Illinois University, must have completed registration, which includes admission, advisement, sectioning, and payment of fees.

## SOCIAL SECURITY NUMBER

Each student seeking admission to the University will
need to present a social security number for identification purposes. Any local social security office can provide assistance in obtaining a number or replacing a lost card. At Alton the social security office is at 1623 Washington Street; at East St. Louis the office is at 435 Missouri Avenue; at Edwardsville the Illinois State Employment Office, 111 West Vandalia, provides social security information.

## REQUIRED TESTS

Each student entering Southern Illinois University directly from high school is required to furnish to the University scores on the test battery administered by the American College Testing Program (A.C.T.). These tests are given at regional test centers throughout the United States in October, December, February, May, and August. Information and application blanks are normally available through the high school guidance director or principal, or may be obtained by writing directly to: American College Testing Program, Box 168, Iowa City, Iowa.

A student who finds it impossible to take the A.C.T. tests may have scores from the College Entrance Examination Board (C.E.E.B.) submitted. The specific scores, which must be submitted if the C.E.E.B. tests are submitted, are Scholastic Aptitude Test, English Composition Test, and Mathematics (Intermediate) Test. In order to have identical test data, a student who submits C.E.E.B. test data will be required to submit scores from the A.C.T. no later than one month after registration.

Transfer students are required to furnish A.C.T. scores to the Student Counseling and Testing Center. (A transcript of these scores is available by sending one dollar and a written request to the American College Testing Program in Iowa City.) If the scores are on file at the student's former school, a request should be made for their forwarding. Test scores are not normally sent with a person's transcript of grades and must be requested separately from the appropriate office at the former school. If the A.C.T. tests have not been taken, arrangements to do so should be made.

## ADVISEMENT

The advisement system requires all new students to have initial advisement through the General Studies Advisement Office. These offices are maintained at each of the centers for the convenience of the student. Freshmen and sophomores will continue to be advised each quarter prior to registration. Following the student's declaring a major (between reaching 64 and 96 hours of credit), the student is assigned to an adviser in his concentration area. Each student is required to declare a concentration upon achieving 96 hours of credit. Probationary students are also required to receive advisement prior to registration.

Graduate students, both classified and unclassified, must have their schedule approved at the Graduate Office before registering.

Students with a declared major in the Education

Division must receive advisement from the Division office prior to registering.

All students should arrange to have advisement early to be sure their schedules will be approved before their registration.

## REQUIRED PHYSICAL EXAMINATIONS

Each new student desiring to enroll at Southern Illinois University is required to have a physical examination completed prior to his initial registration for classes. A special medical form is provided which is to be completed by the student and his personal physician and returned to the University Health Service.

## REGISTRATION

Students may register at Edwardsville for classes at any location (see Edwardsville Registration Calendar, p. iv). Students wishing classes at the Alton or East St. Louis Centers, or at a Center and at Edwardsville, may register at that Center during the periods listed on the applicable Registration Calendar. All General Studies students are required to have approval of their schedule by the General Studies Advisement Office.

Each classified graduate student must have his schedule approved by his adviser and the Dean of the Graduate School before registering for classes at the Enrollment Center. Unclassified graduate students need only the approval of the Dean of the Graduate School. Special cards for this purpose are available at the Graduate Office, 3420 Peck Classroom Building.

During the registration process the student goes to the enrollment office where the assignment is made to specific sections of the courses he is to take.

Mere attendance does not constitute registration in a class, nor will attendance in a class for which a student is not registered be a basis for asking that a program change be approved permitting registration in that class.

## NEW STUDENTS

Students entering the University for the first time are permitted to register only after they have been admitted to the University as evidenced by their receiving the Certificate of Admissions.

Dates for new undergraduate students, freshmen and transfer, will be selective ones in which the students are asked to come to the campus on specific registration dates as determined by the University. Students should not expect to be advised and registered on the same date they are admitted. Appointments for registration will be mailed from the Registrars Office.

New graduate students after advisement may register during the registration period as shown on the Registration Calendars on page iv. Arrangements should be cleared
with the Graduate School to assure that the appropriate adviser will be available before coming to the campus.

$$
R E-E N T E R I N G \quad S T U D E N T S
$$

Students who have attended the University at some former time but not during the session immediately prior to the time they plan re-entry are expected to register during the periods outlined in the Registration Calendar. Readmission procedures must be completed prior to registration.

$$
\begin{aligned}
& C U R R E N T \quad S T U D E N T S \\
& E D W A R D S V I L L E \quad C A M P U S
\end{aligned}
$$

For admittance to registration, students previously enrolled must present their Southern Illinois University ID cards. No one will be permitted to register without an ID card. Each student currently registered in the University will be continued in his present course of study unless a change of concentration is made. A change of concentration is initiated with the chief academic adviser. The change should be made at the time of advisement; the registrar's copy of the change form should accompany the student's registration. A change of concentration made after a registration has been processed will not be reflected in the student's record until the next registration.

Upperclass students who have declared a concentration and who are currently registered in the University may be self-advised for registration purposes. This does not apply to Business Division or Education Division students. Academic advisement is available and is very desirable. The student should prepare his desired program of classes at each registration period and process through the sectioning area of the enrollment office in accordance with the time of his appointment in order to best achieve the desired schedule of classes and time periods.

$$
\begin{aligned}
& C U R R E N T \text { STUDENTS, } \\
& C A R B O N D A L E C A M P U S
\end{aligned}
$$

A student currently enrolled in and attending classes on the Carbondale Campus who desires to register on the Edwardsville Campus will initiate his registration at the sectioning area of the enrollment center in Edwardsville in accordance with the registration calendar except that he may register on the first day of the quarter. Each student will complete the intra-university transfer data form to secure information necessary for the Edwardsville data processing center preparation of registration materials. The student who registers on the first day of the quarter should present his most recent grade report to confirm scholastic eligibility to register.

For the purpose of advisement, the student may wish to have a copy of his transcript sent to the Edwardsville Campus prior to registration.

## PAYMENTOF FEES

All fees are payable at the time of registration. Upon payment of fees, the fee statement and receipt card will
be stamped by the Business Office and returned to the student as a fee receipt. The card should be carried at all times. It serves as official authorization to attend classes as scheduled and must be presented to obtain books and activity cards and to process program changes.

Students unable to pay fees at the time of registration may secure short-term loans from the Student Work and Financial Assistance Office. This must be done before registering.

$$
\begin{aligned}
& F E E S \text { FOR A REGULAR } \\
& Q U A R T E R
\end{aligned}
$$

The fee schedule is as follows:

|  | $\begin{aligned} & \text { Not more } \\ & \text { than } 5 \text { hrs. } \end{aligned}$ | More than 5, <br> less than II | $\begin{aligned} & 11 \text { or } \\ & \text { more } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Tuition Fee-Illinois |  |  |  |
| Resident | \$14.00 | \$28.00 | \$42.00 |
| Tuition Fee-Out of State $\qquad$ | (30.00) | (115.00) | (172.00) |
| Student Welfare and |  |  |  |
| Recreation Building |  |  |  |
| Trust Fund Fee | 5.00 | 10.00 | 15.00 |
| Book Rental Fee | 3.00 | 6.00 | 8.00 |
| Student Activity Fee | 3.50 | 7.00 | 10.50 |
| University Center Fee | 5.00 | 5.00 | 5.00 |
| Athletic Fee | 3.00 | 6.50 | 10.00 |
| Total-Illinois Resident .... | \$33.50 | \$62.50 | \$90.50 |
| Total-Out of State |  |  |  |
| Resident | (49.50) | (149.50) | (220.50) |

Graduate students do not rent their textbooks and do not pay the book rental fee. They purchase their books.

Students having special fee status, such as scholarship holders, faculty, and staff, will pay fees according to their particular status. Prior to registration this student will go to the Student Work and Financial Assistance Office to secure certification.

## LATE REGISTRATION FEE

The first day of a quarter is considered the last day of the regular registration period. Registrations thereafter, including those for classes "to be arranged" are considered late registrations and are assessed an appropriate late registration fee. This fee is $\$ 2.00$ the first day and an additional $\$ 1.00$ per day to a maximum of $\$ 5.00$.

## ACADEMIC LOAD

The normal class load is 16 quarter hours for undergraduate students and 12 quarter hours for graduate students. The maximum load for both is 18 hours. A student with a 4.25 average or above for the preceding quarter may be allowed by written permission of the chief academic adviser or by the dean of his division to take as many as 21 hours. In no case may a student carry or be credited with more than 21 hours in any quarter. A student on probation may not take more than 14 hours.

A person should not register for more than 8 hours if he is employed full time.

The Selective Service System requires a minimum of 12 hours for an undergraduate and 8 hours for a graduate to qualify for a student deferment. There is a further requirement that he complete 48 hours each year.

The National Defense Education Act requires a minimum of 12 hours to qualify for a student loan.

For students receiving benefits under the "GI Bill" (P.L. 358) the following regulations apply:

Undergraduate Graduate
Full benefits $\quad 14$ or more hrs. 12 or more hrs.
$3 / 4$ benefits $\quad 10-13 \mathrm{hrs}$. $9-11 \mathrm{hrs}$.
$1 / 2$ benefits 7-9 hrs. 6-8 hrs.

## PREREQUISITES

Students are responsible for checking course prerequisites in the undergraduate and graduate catalogs and in this class schedule. Those who do not have specific prerequisites for a course may register for it only if they have had a comparable course or have written consent of the instructor.

## AUDITING OF COURSES

A student may register for courses in an "audit" status. He receives no letter grade and no credit for such courses. An auditor's registration card must be marked accordingly. He pays the same fees as though he were registering for credit. He is expected to attend regularly and is to determine from the instructor the amount of work expected of him. If an auditing student does not attend regularly, the instructor may determine that the student should not have the audited course placed on his record card maintained in the Registrar's Office. A student registering for a course for credit may change to an audit status or vice versa only for fully justified reasons and only during the first four weeks of a quarter.

## REGISTERING FOR AND DROPPING COURSES

Mere attendance does not constitute registration in a class, nor will attendance in a class for which a student is not registered be a basis for asking that a program adjustment be approved permitting registration in that class. A student is officially registered only for those courses and sections appearing on his registration cards. Changes can be made only after fees are paid and must be made through an official program change.

A student desiring to make a program change must secure approval of his adviser. He will then go to the Enrollment Center. (A student at East St. Louis or Alton may initiate his request to drop a course by going to the Gencral Office.) He is required to present his fee receipt program card and must complete the following procedure.
(1) After having been cleared with the Enrollment Center, program changes for which a program change fee is assessed must be presented to the Business Office for payment. (2) The student immediately retions the program change to the Enrollment Center in the Registrar`s Office for final processing. (3) A student has not completed his program change until he presents it to the Enrollment Center. NO CHANGE IS OFFICIAL UNTIL THE PRECEDING PROCEDURE IS COMPLETED.

A student who finds it necessary to make an adjustment to his program by adding or dropping a course may do so during normal office hours at the Edwardsville Enrollment Office. (No changes will be made on the first day of the quarter.) A program adjustment must be made to drop or add a course. A student may not drop a course merely by stopping attendance. Failure to officially drop a course may result in academic penalty.

## CHANGING FEESTATUS

Students making program changes which result in their changing from one fee status to a higher fee status will be assessed additional tuition and fces. Students changing from a higher fee status to a lower fee status may apply for a refund provided the reduction in program is made officially by a program change during the same period at the start of a quarter in which students withdrawing from the University are eligible for a refund. This is usually during the first ten days. For dates refer to the Registration Calendars on page iv.

## WITHDRAWAL FROM SCHOOL

A student who finds it necessary to withdraw from school while the quarter is in progress must report to the Student Affairs Office to initiate official withdrawal action. No withdrawal will be permitted during the last two weeks of a quarter except under exceptional conditions. A refunding of fees is permitted only if a withdrawal is officially completed within the first two weeks of a quarter and if the application for a refund is received in the Registrar's Office within two weeks following the last regular registration period. See the Registration Calendar in this bulletin for the specific dates concerning withdrawal and refunding of fees.

A student who registers and then finds that he cannot attend school must also officially withdraw from school. He may do this by asking the Student Affairs Division to initiate official withdrawal action for him. This must be done by the end of the first two weeks if he expects to get a refund.

## CANCELLATIONOF <br> REGISTRATION

A registration including the payment of tuition and fees may be considered invalid if the student is declared to be ineligible to register due to scholastic reasons. The same
situation may exist due to financial or disciplinary reasons if certified to the Registrar by the Director of Student Affairs.

## PERSONAL DATA CHANGES

Changes in personal data should be reported promptly. Types of change and method of reporting are:

1. address changes. Should be reported immediately either at the time of registration or at the Registrar's Office.
2. name changes. Should be made at the Registrar's Office. Verification is required.
3. marital status changes. Should be made at the Registrar's Office.
4. legal residence changes (whether an Illinois or out-of-state resident.) Must be requested by completion of the Application to be Classified an Illinois Resident form in the Registrar's Office. Before the change is made the student must have met the regulations governing residency status as established by the Board of Trustees.

## HOSPITALIZATION

Blue Cross and Blue Shield In-hospital Insurance is offered to all students. Cost of the insurance is $\$ 9.00$ per quarter for single and $\$ 28.20$ per quarter for family plan. This insurance is available at the time of registration.

## Schedule of : Classes

Except for the Guaranteed Center Schedules, the University reserves the right to cancel, combine, divide, or limit enrollment in any class or classes; to change the date, time, or place of meeting; to make any other revisions in these course offerings which may become desirable or necessary; and to do so without notice and without incurring obligation.

## EXPLANATION OF THE SCHEDULE

Bold-Face Line: The course's identification number is followed by the number of quarter hours of credit and the descriptive title. Following the title, a dotted line separates the title from the prerequisite, if any, which appears at the right-hand end of the line and may continue to the second line.

Light-Face Lines: The first column lists the section numbers. Those sections offered at Edwardsville always begin with 0 ; those sections offered at Alton always begin with 2; those sections offered at East St. Louis always begin with 4 . Following each section number is the time the class begins, between 8:00 A.m. and 4:20 p.m. for daytime classes. An ending time is listed only if the class period is longer than 50 minutes. The section number of each evening class has the letter e prefixed. A $\star$ indicates a section which is part of the Guaranteed Center Schedule and is not subject to cancellation. The days when the class meets, the place where it mects, and the instructor's last name complete the entry.

The course numbering system is as follows:
000-099 Courses not properly falling in the following categories
100-199 For freshmen
200-299 For sophomores
300-399 For juniors and seniors
400-499 For seniors and graduate students
500-600 For graduate students only
Students registering for courses listed as "Arranged" should consult the instructor indicated, or the head of the division if no instructor is listed, to determine time and place of meeting.

The following list of building abbreviations will help in the location of classrooms.

ANA -Annex A--Alton

| CB | -Communications Bldg.-Edwardsville |
| :---: | :---: |
| ESL | -East St. Louis Center |
| Gym | -Gymnasium-Alton |
| HUM | -Humanities Building-Alton |
| LB | -Lovejoy Memorial Library- Edwardsville |
| PB | -John Mason Peck General Classroom Building-Edwardsville |
| SCI | -Science Building-Alton |
| SL | -Science Laboratory Building- |
| 397 | -Cartography Laboratory-East St. <br> Louis |
| UC | -_University Center-Edwardsville |
| Wagner | -Wagner Building-Edwardsville |

FINAL EXAMINATIONS
For late afternoon, evening, and Saturday classes, final examinations are given during regular class sessions.
FOR MORE INFORMATION

For additional information concerning admission, fees, etc., address

Director of Admissions or telephone
Southern Illinois University
Edwardsville, Illinois 62025 692-2720
Edwardsville
To obtain a complete schedule of classes offered on the Edwardsville Campus (including the Alton and East St. Louis Centers) for winter, 1969, address

Central Publications or telephone
Southern Illinois University 692-3650
Edwardsville, Illinois 62025
Edwardsville


## MAN'S PHYSICAL ENVIRONMENT AND BIOLOGIGAL INHERITANGE (GSA)

110b-4 The Earth and Its Environment
E007 6:30-8:20 M W SL 1215 Yarbrough 20Ib-4 Man's Biological Inheritance .......................................... 201a

| Lect t.J | 6:30-8:15 | Tu | PB 0312 | CC.TV |
| :---: | :---: | :---: | :---: | :---: |
|  | 6:30-7:20 | Th | PB 0312 | CC.TV |
| Lect eK | 6:30-8:15 | Tu | PB 0314 | CC.TV |
|  | 6:30-7:20 | Th | PB 0314 | CC.TV |
| E005 | 4:30-6:20 | M | SL 2211 |  |
| E006 | 6:30-8:20 | M | SL 2211 |  |
| E015 | 4:30-6:20 | Tu | SL 2211 |  |
| E017 | 8:25-10:15 | Tu | SL 2211 |  |
| E025 | 4:30-6:20 | W | sL 2211 |  |
| E026 | 6:30-8:20 | W | SL 2211 |  |
| E035 | 4:30-6:20 | Th | SL 2211 |  |
| E036 | 7:30-9:20 | Th | SL 2211 |  |
| E045 | 4:30-6:20 | F | SL 2211 |  |

3I2-3 Conservation of Natural Resources
E005 5:05-6:20 Tu Th PB 0306 Gore
$\underset{\text { e004 }}{\text { 331-3 Climate }}$ 6:30-8:20

363a-3 Philosophy of Science (Same as GSC 363a) .......... Complet 2nd-level GSA
E001 6:30-7:45 Tu Th PB 0307 Livergood

## MAN'S SOCIAL INHERITANGE AND SOCIAL RESPONSIBILITIES (GSB)

 201a-4 The Individual and His Cultural Environment ................................. $\begin{array}{llllll}\star \text { E201 } & \text { 6:30-8:20 } & \text { Tu Th SCI } 102 & \text { Hayes }\end{array}$
20Ic-4 The Individual and His Cultural Environment
E003 6:30-8:20
Tu Th PB 1410

203a-4 American Politics in the World Environment ............................. E004 6:30-8:20 Tu Th PB 0408 Feeney
300a-3 History of the United States: 1492 to 1815 ..................................... E004 6:30-7:45 Tu Th PB 0304 Branz
300b-3 History of the United States: I8I5 to 1900 ........................ E005 8:30-9:45 Tu Th PB 1306 Millett 300c-3 History of the United States: 1900 to Present ............................. E002 6:30-7:45 M W PB 0403 McKee
311-3 Economic Development of the United States ........ 101c or 103b E001 8:30-9:50 M W PB 2405 Carbaugh
312-3 Comparative Economic Systems ......................................................................


## MAN'S INSIGHTS AND

## APPRECIATIONS (GSC)


253-4 Literary Masterpieces of Antiquity .................................... I51
E010 6:30-8:20 M W PB 1306


ORGANIZATION AND
COMMUNICATION OF IDEAS (GSD)


HEALTH AND PHYSICAL
DEVELOPMENT (GSE)


ACCOUNTING (ACCT)

| 230-4 | Accounting Principles |  |  |  | Soph. stand.Nissing |
| :---: | :---: | :---: | :---: | :---: | :---: |
| E003 |  | 6:30-8:20 | M W | PB 2304 |  |
| E004 |  | 6:30-8:20 | Tu Th | PB 2304 |  |
|  | $\star$ E401 | 6:30-8:20 | M W | ESL 110 |  |
| 231-4 | Financial A | Accounting A | ysis |  | 230 |
| E003 |  | 8:30-10:20 | M W | PB 2304 | Milles |
| E004 |  | 8:30-10:20 | Tu Th | PB 2304 |  |
|  | $\star$ E401 | 8:30-10:20 | M W | ESL 110 |  |
| 330-4 | Managerial | Cost and B | geting |  | 231 |
| E002 |  | 6:30-8:20 | M W | PB 3315 |  |
| E003 |  | 6:30-8:20 | Tu Th | PB 3315 | Mains |
| 341-4 | Cost Accou | unting Princip |  |  | 231 |
| E001 |  | 6:30-8:20 | Tu Th | PB 3316 |  |



## ART (ART)

050-3 Avocational Painting

| :001 |  | 6:20-10:09 | TII | Th | Wagner |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 051-3 | Avocational | Ceramics |  |  |  |  |
| E001 |  | 6:20-10:00 | Tu | Th | Wagner |  |
| 349a-3 Italian Renaissance Art |  |  |  |  |  |  |
| E001 |  | 7:00-8:30 | M | W | SL 3325 | Jacobson |
| 401-4 | Research in | Painting |  |  |  | 310a/b/c |
| E001 |  | 6:30-10:10 | Tu | Th | SL 0218 | Freund |

408-4 Art Education for Elementary Teachers II ........ By permit only E001 6:30-9:20 M W SL 0209 Abtvater 566-4 Research in Art Education .................................... By pernit only 001 Arranged
571-2 to 5 Readings in Art History ............................. By permit only
001 Arranged
599-5 to 9 Thesis ............................................................ By permit only
E001
Arranget

BIOLOGY (BIOL)

| $\begin{aligned} & 423-4 \\ & \text { F001 } \end{aligned}$ | Principles of Parasitism$5: 30$ <br> $5: 30-9: 20$ | $M^{T u} \mathrm{Th}$ | SL 3225 <br> SL 3210 | Nyer |
| :---: | :---: | :---: | :---: | :---: |
| 524-3 | Biogeography |  |  | 303 c |
| E001 | 7:30-8:45 | Tu Th | SL 2231 | Axtell |
| 590-1 | Graduate Biology Seminar |  |  | stand. |
| E001 | 4:30 | W | SL 2231 | Axtell |

## BUSINESS ADMINISTRATION (BA)

544-4 The Methodology of Business Research .................. QM 510,


BUSINESS COMMUNICATIONS (BC)
390-4 Business Communications GSD 101b, con. enrol. in GBA 340
E003
8:30-10:20
$\Gamma \mathrm{Th}$
PB 3404

## BUSINESS EDUCATION (BSED)

324a-4 Advanced Shorthand and Transcription .............................. 221c E001 6:30-8:20 Tu Th PB 3417 Bulte 351-4 Foundations of Business Education .................................................... E001 4:30-6:20 Tu Th PB 3316 Houser 404-3 Teaching Shorthand and Transcription .............................. 324a E001 $5: 30-8: 20$ M PB 3417 Palmer 414b-3 Organization and Administration of Cooperative Vocational Business Education Programs
E001 5:30-8:20 Tu PB 3302 McElroy
502-4 Introduction to Research in Business Education E001 6:30-8:20 Tu Th PB 3422 Brady

## CHEMISTRY (CHEM)

| 111a-5 | Chemical Principles and Inorganic Chemistry |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| E001 | 5:30-7:20 | M | W | SL 3114 |
|  | 7:30-10:20 | M |  | SL 2215 |
| E002 | 5:30-7:20 | M | W | SL 3114 |
|  | 7:30-10:20 |  | W | SL 2215 |
| E003 | 5:30-7:20 | M | W | SL 3114 |
|  | 2:30-5:20 |  | W | SL 2215 |
| 375-1 | Chemistry Seminar |  |  |  |
| E001 | 4:30 | M |  | SL 2224 |

14 CHEMISTRY (CHEM)


## COUNSELOR EDUCATION (CED)



511-4 Educational Implications of Learning Theories ................................
515-4 Psychological Aspects of Education ................................................. E001 5:30-8:20 Th PE 2306
522-4 Educational Measurements II .....................................
525-4 School Behavior Problems and Their Prevention ............................



| 538-4 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| E001 | Counseling Theory and Practice II | W.................................................... |  |
| $5: 30-8: 20$ | W | PB 3303 | Soper |

541-4

E001 Occupational Information | and Guidance |
| :---: |
| $5: 30-8: 20$ |

| 542-4 Basic Principles of Guidance | $\ldots \ldots . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ~$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| E001 | $5: 30-8: 20$ |  | Th | PB 2410 | Ederle |



| E001 | 5:30-8:20 | M | Pract Ctr | McBride |
| :---: | :---: | :---: | :---: | :---: |
| E002 | 5:30-8:20 | Tu | Pract Ctr | Mermis |
| E003 | 5:30-8:20 |  | Pract Ctr | Davis |


| 545f-4 | Seminar in Guidance: Pupil Adjustment | ........................................ |  |  |
| :---: | ---: | :---: | :---: | :---: | :---: |
| E001 | $5: 30-8: 20$ | W | LB 0042 | Ederle |

545j-4 Seminar in Guidance: Organization and Administration ............

| 562b-4 | Adolescent Development in Education |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | E401 | 5:00-8:00 | Th | ESL 214 | Troyer |
| 575c-4 Practicum |  |  |  |  |  |
| 001 |  | Arranged |  | Pract Ctr | Moore |
| 002 |  | Arranged |  | Pract Ctr | Mermis |
| 003 |  | Arranged |  | Pract Ctr | Soper |

## ECONOMICS (ECON)





## EDUCATION ADMINISTRATION (ED AD)

| 355-4$\text { Е } 005$ | Philosophy of Education | C Ed 305, cons. of |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 5:30-7:20 | undergı Tu T | Ithr. ed. advsmt. OfficePB 1402 |  |
|  | E401 5:30-7:20 | M W | ESL 112 | Lee |
| 420-4 Legal Basis of American Education |  |  |  |  |
| E001 | 5:30-8:20 | Th | PB 0309 | Ackerlund |
| 431-4 | History of Education in the United States |  |  |  |
| E001 | 5:30-8:20 | Tu | PB 0412 | Bruker |
| $\begin{aligned} & 434-4 \\ & \text { E001 } \end{aligned}$ | Administrator's Workshop |  |  |  |
|  | 5:30-8:20 | W | PB 1307 | Andree |
| $\begin{aligned} & 456-4 \\ & \quad \text { E001 } \end{aligned}$ | School Supervision |  |  |  |
|  | 5:30-8:20 | Th | PB 1307 | Krchniak |
| $\begin{gathered} 480-4 \\ \text { E001 } \end{gathered}$ | Backgrounds of Urban E | Education |  |  |
|  | 5:30-8:20 | Th | PB 0412 | Gore |
| 500-4 | Research Methods |  |  |  |
| £001 | 5:30-8:20 | 11 | PB 2414 | Pierce |
| E002 | 5:30-8:20 | Tu | PB 2409 | Helsel |
| E003 | 5:30-8:20 | Th | PB 2409 | Helsel |
| 004 | 9:00-11:40 |  | S PB 2106 | Jordan |
|  | E410 5:30-8:20 | W | ESL 115 | Krchniak |

$\underset{\text { E001 }}{\text { 501-4 }}$ Seminar in $\underset{5: 30-8: 20}{\text { Educational }}$ Administration ....................................

503-4 Seminar in Philosophy of Education ......................................

|  |  |  |
| :---: | :---: | :---: |
|  |  |  |



551-4 Community Junior College Curriculum .....................................

E001 5:30-8:20 W
560-4 Curriculum ............................ Cons. of inst. for 002 only

| E001 | 5:30-8:20 <br> 002 | Arranged |
| ---: | :--- | :--- | :--- | :--- |


| 565-4 | The Community Junior$5: 30-8: 20$ |  | II |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |

575a-4 Individual Research (Curriculum) ............... Cons. of instr. and fac. chmn.
001 Arranged
575b-4 Individual Research (Supervision) ................. Cons. of instr.
001 Arranged

575c-4 Individual Research (Buildings) ......................... Cons. of instr. and fac. chmm.
001 Arranged

575d-4 Individual Research (Finance) ......................... Cons. of instr. and fac. chmn.
001 Arranged
575e-4 Individual Research (School Law) ................. Cons. of instr.
001
Arranged
575f-4 Individual Research (Comparative Education) and fac. chmn.
, Cons. of instr. and fac. chmn.


575h-4 Individual Research (Philosophy of Education) ...... Cons. of instr. and fac. chmn.

16 EDUGATION ADMINISTRATION (ED AD)


521b-4 cons. of instr.

543-4 Teaching the Social Studies in the Elementary School Jordan
$\qquad$
E001 5:30-8:20 M PB 2403

553-4 Internship in Professional Education $\qquad$ or fac. chmn. 001 Arranged

Darnell
557-4 The Elementary Principalship
Tu PB 2414 Steinbrook
561-4 The Elementary School Curriculum ..................... Cons. of instr.

| E001 | or fac. chmn. for sec. e002 only. |  |  |  |
| ---: | ---: | ---: | ---: | ---: |
| E002 | $5: 30-8: 20$ | Tu | PB 0403 | Comer |
| 567 H | $5: 30-8: 20$ | Tu | CB 0194 | Swerdlin |

567b-4 Teaching Competencies and Their Application ............ Cons. of instr. or fac. chmn.

| 001 |  | Arranged | Darnell |
| :---: | :---: | :---: | :---: |
| 002 |  | Arranged | Harmin |
| 575a-4 | Individual | Research (Curriculum) | Cons. of instr. and fac. chmn. |
| 001 |  | Arranged |  |
| 575b-4 | Individual | Research (Supervision) | Cons. of instr. |

Course No.-Hours
Edw. Alton E.St. Louis Time
Edime
 $001 \quad$ Arranged
575d-4 Individual Research (Science) $\qquad$ Cons. of instr. and fac. chmn.
001 Arranged
575e-4 Individual Research (Reading)
Cons. of instr. and fac. chmn.

## 001 Arranged

575f-4 Individual Research (Social Studies)
Cons. of instr. and fac. chmn.
001
Arranged

575g-4 Individual Research (Problems in Elementary Education) Cons. of instr. and fac. chmm.
001 Arranged
575h-4 Individual Research (Arithmetic) $\qquad$ Cons. of instr. and fac. chmn.
001
$575 j-4$
Individual Arranged
Research (Problems in Kindergarten-Primary) Cons. of instr. and fac. chmn.
001 Arranged
596-5 to 9 Independent Investigations.. Cons. of instr. and fac. chmm. 001 Arranged
597-1 to 3 Thesis 001 Arranged

SECONDARY EDUCATION (EDS)
315-4 High School Methods ............................ Ed Ad 355, cons. of E003 5:30-8:20 M PB 2306 Schnabel Four extra sessions arranged.
407-4 The Junior High School
E001 5:30-8:20 M PB 3305 Krchniak Four extra se-sions arranged.
480-4 Backgrounds of Urban Education
E001 5:30-8:20 Th PB 0412 Gore

505-4 Improvement of Reading Instruction
E001 5:30-8:20 M PB 0312 Richardson

507-4 Readings in Reading ...................................... 505, cons. of instr.
001 Arranged
508-4 Seminar: Trends in Selected Areas in Secondary Schools
E001 5:30-8:20 IV PB 0312 Hetsel

509-4 Practicum in Reading .................................. 521c, cons. of instr. 001 Arranger
514-4 Organization and Administration of Reading Programs $\qquad$ L001 5:30-8:20 Tu PB 2306 Richardson 521a-4 Diagnosis and Correction of Reading Disabilities ............ 505 , cons. of instr.
Student enrolls for lecture and one clinic.

|  | Student enrolls for lecture and one clinic. |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Lect | $5: 30-7: 20$ | Th | PB 0405 | Bear |
| Clinic 1 | $8: 00-9: 30$ | S PB 0406 |  |  |
| Clinic 2 | $9: 30-11: 00$ | S PB 0406 |  |  |
| Clinic 3 | $11: 00-12: 30$ | S PB 0406 |  |  |

521b-4 Diagnosis and Correction of Reading Disabilities ............ 521a, cons. of instr

|  | Student enrolls for lecture and one clinic. |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Lect | $5: 30-7: 20$ | W | PB 0405 | Bear |
| Clinic 1 | $8: 00-9: 30$ | S PB 0406 |  |  |
| Clinic 2 | $9: 30-11: 00$ | S PB 0406 |  |  |
| Clinic 3 | $11: 00-12: 30$ | S PB 0106 |  |  |

553-4 Internship in Professional Education ................. Cons. of instr. or fac. chmo.

## 001 Arranged

562-4 The High School Curriculum $\qquad$ Darnell Cons. of instr. or fac. chmn.

| 10001 |  | 5:30-8:20 | T. | 18 3 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 67b-4 | Teaching Competencies and Their Application $\qquad$ Cons. of instr. or fac. chmn. |  |  |  |  |
| 001 |  | Arranged |  |  | Darnell |
| 002 |  | Arranged |  |  | Harmin |
| $575 a-4$ | Individual | Research ( | du | ... | of instr. |
| 001 |  | Arranged |  |  |  |



## SPECIAL EDUCATION (SPED)

410b-4 Problems and Characteristics of the Mientally Retarded ............ E001 5:30-8:20 ThF PB 0403 Tucker Meets first four Fridays.
414-4 The Exceptional Child
E001 5:30-8:20 Tu F PB 0413 Harris Meets first four Fridays.


Meets first four Fridays.
496-4 Readings in Special Education .............................. By permit only E001 Arranged
501-4 Special Research Problems ................................... By permit only 001 Arranged Shaffer
513-4 Organization, Administration, and Supervision of Special Classes

5:30-8:20 W PB 2414
518-4 Workshop in Special Education ........................ By permit only 001 Arranged


Mental Retardation
PB 2415

## ENGINEERING (ENGR)

| $\begin{array}{r} 101 \mathrm{~b}-3 \\ \text { E003 } \end{array}$ | Engineering Graphics |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 6:30-9:20 | M | W | SL 1216 |  |
| 523-3 | Digital Simulation Techniques |  |  |  | Bach. deg. in engin., math., or phys. |  |
| E001 |  | 4:30-5:45 | M | W | CB 0186 | Rutledge |
| 524b-3 | Linear and | Non-Linear | Pro |  |  | 524a |
| E001 |  | 8:30-9:45 | M | W | SL 1210 | Jones |
| 560a-4 | Automa | Control Th |  |  | Bach. | engin., <br> or phys. |
| E00 |  | 6:30-8:20 | M | W | PB 3317 | Mund |

Course No.-Hours Descriptive Title
Edw. Alton E. St. Louis Time

## E N GLISH (ENG)

300-4 Principles of English Grammar .................................... Complet.
2nd-level GSC
E002
4:30-6:20 M II
PB 0302

302b-4 Survey of English Literature 1550-1750 ................... Complet.
2nd-level GSC
E003 6:30-8:20 M W Pl 0413

309b-4 Survey of American Literature after 1860 ................. Complet. 2nd-level GSC
:002 6:30-8:20 Tu Th PB 0303

391-3 Usage in Spoken and W'ritten English ........................ Complet.
2nd-level GSC
E003 8:30-9:45 Tu Th PR 0307

404b-4 Middle English Literature: Chaucer-Early Poems and Troilus Complet. 2nd-level GSC, jr. stand.
L001 4:30-6:20 M II PB 0303 Drake 405a-4 Descriptive Linguistics ........... Complet. 2nd-level GSC, jr. stand.
E001 8:30-10:20 Tu Th I'B 0309 Van Syor

458b-4 American Fiction: Novels since 1914 .......... Complet. 2nd-level G.SC, jr. stand.
F001 4:30-6:20 M W I'B 0412

486-4 Workshop in High School English ............. . Complet. 2nd-level GSC, jr. stand.
E001 $4: 30-6: 20$ Tu Th PB 0307 Frogner.

500-4 Materials and Methods of Research in English ..... Grad stand
E001 8:30-10:20 M II I’B 3317 Hoyenga

519-4 Studies in Contemporary British Literature: Modern Poetry Grad. stand.
Ł.001 6:30-8:20 M W J'P 2413 Jonct

566-4 Studies in Shakespeare .............................................. Grad. stand.
E001 8:30-10:20 Tu Th l'B 3317 Taylor

580-4 Traditional Themes: American Hero ...................... Grad. stand. 1001 4:30-6:20 Tu Th PB 3317 Zanger

FINANCE (FIN)


## FOREIGN LANGUAGES (FL)

German (Ger)
126b-1 Elementary German Conversation .................. Con. enrol. in GSD 126b

$$
\text { E401 } \quad 7: 55-8: 20 \quad \text { Tu Th ESL 122 }
$$

1talian (Ital)
201b-3 Intermediate 1talian ........................ 201a or cons. of chmn. E201 6:30-7:45 M W

ANA 101
220-2 Intermediate 1 talian Conversation
201c or con. enrol. in 201b or cons. of chmn.

Russian (Russ)
136b-1 Russian Conversation ....................... Con. enrol. in GSD 136b

Spanish (Span)


## GENERALBUSINESS ADMINISTRATION (GBA)

| 140-4 | Introduction to Business |  |  |
| :---: | :---: | :---: | :---: |
| E004 | 6:30-8:20 | M W | I'B 2411 |
| E005 | 8:30-10:20 | Tu Th | PB 2409 |

20 GENERAL BUSINESS ADMINISTRATION (GBA)


555-3 Seminar in Comparative Politics ........................... Cons. of instr.,

|  |  |  |  | enrol. in 575 fol. quar. |
| :---: | :---: | :---: | :---: | :---: |
| 1:001 |  | 6:30-9:20 | M | Arranged Maier |
| 575-3 | Seminar in | International | Relations | Cons. of instr., |
|  |  |  |  | enrol. in 555 fol. quar. |
| E001 |  | 5:30-8:20 | Tu | Arranged Glaser |

## HEALTH EDUCATION (HED)

| $313 s-4$ | Introduction to Safety Education | ................................................... |  |  |
| ---: | ---: | :---: | :---: | :---: |
| E001 | $5: 30-8: 20$ | M | PB 2409 | Klein |

## HISTORY (HIST)



## HUMANITIES (HUM)

$302-3$ or 4 Humanities Honors
By permit only E002 8:30-9:45 Tu Th PB 3422 Guenther The Outsider in Modern Literature: Strangers in This World

INSTRUCTIONAL MATERIALS (IM)
308-4 School Library Technical Processes
1:001 5:30-8:20 M PB 0410 Holzberlein

403-4 School Library Functions and Managenent
5:30-8:20 T T11 PB 0410 Holzberlein f.001 5:30-8:20 T11
$\qquad$ berleín
413-4 Cataloging Non-Book Materials 5001 Th PB 0410 Holzberlein
417-4 Audio-Visual Methods in Education
Student enrolls in one lecture section, one quiz sec tion, and one hour per week self-instruction.
Lect eB
5:30-7:20
W PB 2306
Thota


514-4 Survey of Research and Development in Instructional Materials
 001

9:00-11:40
$S$ PB 0411 Gilligan

## MANAGEMENT OPERATING SYSTEMS (MOS)

281-4 Principles of Computer Programming .... .. Cons. of fac. chmn.
E001 6:30-8:20 M W CR 0194 Eirich
380-4 Management Operating Systems I ................................. Acct 231
E002 $4: 30-6: 20$ Tu Th CB 0186 Miller
381-4 Management Operating Systems II ............................................. 281
E002 6:30-8:20 Tu Th CB 0186 Werner
580-4 Management Systems .... ................................. MBA students only
E001 6:30-10:20 M CB 0186

583-4 Advanced Management Systems ..................... MBA students only

| E001 $6: 30-10: 20$ | W | CB 0186 | Jarett. |
| :--- | :--- | :--- | :--- | :--- |
| Miller |  |  |  |

MARKETING (MKTG)


## MATHEMATICS (MATH)

| $\begin{array}{r} 150 a-4 \\ \text { E002 } \end{array}$ | Elementary Calculus and $6: 30-8: 20$ | Analytic G M | $\begin{gathered} \text { metry } \\ \text { SL } 1224 \end{gathered}$ | GSD 114c |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 150b-4 | Elementary CaIculus and | Analytic | ometry |  | 150 a |
| L004 | 6:30-8:20 | M W | SL 1225 |  |  |
| 305b-4 | Applied Mathematics for | the Physica | Sciences |  | $305 a$ |
| E.001 | 6:30-8:20 | Tu Th | SL $3 \pm 25$ |  |  |
| 410b-4 | Statistical Analysis |  | 410a or | GSD | 114 d |
| E001 | 4:30-6:20 | Tu Th | SL 2231 |  |  |
| 420a-3 | Fundamental Concepts of | Algebra |  |  | 321 |
| E001 | 6:30-7:45 | M W | SL 2224 |  |  |
| 421a-3 | Linear Algebra |  |  |  | 321 |

E.001 5:00-6:15 Tu Th SL 1224

446b-3 Structure of Mathematics ......................................... in teach. or cons. of instr.
E001 6:30-7:45 Tu Th SL 1210 Holden

| E00l | 7:00-8:15 | Tu Th | $\text { SL } 1225$ | of instr. Garder |
| :---: | :---: | :---: | :---: | :---: |
| 458b-3 | Finite Mathematics | Exp. | teach. or | of instr. |
| E001 | 6:30-7:45 | Tu Th | SL 1224 | Sturtey |
| 472b-3 | Computer Science |  |  | 305a, 321 |
| E001 | 8:30-9:45 | Tu Th | CB 0186 | Rutledge |
| 483a-3 | Introduction to Mathe | cal Statist |  | ... 252b |
| E001 | 6:30-7:45 | Tu Th | SL 0226 | Clemans |
| 501b-3 | Real Variables |  |  | 501a |
| 上:001 | 8:30-9:45 | M W | SL 1224 | Bennewitz |
| 520b-3 | Modern Algebra |  |  | 520a |
| r:001 | 4:30-5:45 | M W | SL 1224 | dstrım |

22 MATHEMATICS (MATH)

| Course No.-Hours Descriptive Title Edw. Alton E. St. Louis Time | Days | Place | Prerequisite Instructor |
| :---: | :---: | :---: | :---: |
| 530-3 Point Set Topology |  |  | 3 or 501b |
| e001 4:30-5:45 | Tu Th | SL 1225 | Poynor |
| 550-1 to 10 Seminar ................. 001 |  |  | s. of instr. |
| Arranged <br> 551b-3 Functional Analysis |  |  | 551a |
| E001 6:30-7:45 | M W | SL 1210 | Kessler |
| 595-1 to 10 Special Project |  |  |  |
| 001 Arranged |  |  |  |
| 599-1 to 9 Thesis |  |  |  |
| 001 Arranged |  |  |  |

M U S I C (MUS)
002e-1 Community Choral Society


## PERSONNELAND INDUSTRIAL RELATIONS (PERS)

450-4 Personnel Administration
GBA 340
E002 8:30-10:20 M W PB 2412
451-4 Labor Relations Law and Collective Bargaining ...... GBA 340 E001 6:30-8:20 Tu Th PB 2411
452-4 Advanced Problems in Personnel Administration
E001
6:30-8:20
Tu Th
PB 2406

## PHILOSOPHY (PHIL)

302-4 World Religions .............................................................. Soph. stand.
E001 6:30-8:20 Tu Th PB 0302 Linden

385d-4 History of Western Philosophy: 19th Century ...... Soph. stand. E001 $4: 30-6: 20$ M W PB 0309 Marti
495-2 to 12 Independent Readings ............................... By permit only 001 Arranged

## PHYSICAL EDUCATION (PE)

350-4 Methods and Materials for Teaching Physical Education Activities in the Elementary School $\qquad$


P H Y S I C S (PHYS)
530a-3 Electromagnetic Theory
E001 6:30-7:45 M W SL 2231 Hakeem

## PRODUCTION (PROD)

$\begin{array}{cccccc}\text { 461-4 Methods Design and Work Measurement } & \text {.............................. } 460 \\ \text { E001 } & 8: 30-10: 20 & \text { M W } & \text { PB } 2413 & \text { Ingwersen }\end{array}$

| Course No.-Hours |
| :---: |
| Edw. Aton E. St. Louis |

PSYCHOLOGY (PSYC)


490-1 to 4 1ndependent Projects ........................................ Cons. of chmn.
001 Arranged

501b-4 Proseminar in General Psychology ..................................... 501a E001 5:30-7:20 T11 Th PB 2415 McCall
521-4 Research Design and Inference I1 ........................................ 520
E001 $7: 30-9: 20$ Tu Th PB 2415 Brinkmann 530-4 Personality Theory and Dynamics ................. 440, cons. of instr.
E001 $5: 30-8: 20$ WB 3422 Clodfelder

541b-4 Psychodiagnostics I ...................................................... 211b, 421
E001 5:30-8:20 M PB 2406 Harris
590-1 to 4 Readings in Psychology ........................... Cons. of chmn.
001 Arranged
591-1 to 4 Research in Psychology ........................... Cons. of chmm.
001 . Irranged
593-2 to 4 Practicum in Psychology $\qquad$ Cons. of instr. and fac. chmn.
001 Arranged Engbretson
599-2 to 4
001 Thesis ................................................................................ of chmn.

## QUANTITATIVE METHODS (QM)

210-4 Probability in Decision-Making ................................... GSD 114 d E002 6:30-8:20 Tu Th PB 0306 Wheelhouse 211-4 Statistical Analysis for Business Decisions ............................ 210 E003 6:30-8:20 M W Pl 3316
310-4 Operations Research for Managers ........................................ 211 E002 8:30-10:20 M W PB 3315 Rogier 511-4 Quantitative Methods for Decision-Making ........................ MBA
students only
E001
6:30-10:20 $\quad T_{11}$
PB 2403
Rogier

## REHABILITATION (REHB)

519-2 Selection, Placerient, and Followup $\qquad$

$$
001 \text { Arranged }
$$

531-2 Vocational Appraisal
001 Arranged
580-2 Practicum in Rehabilitation Services
001 Arranged
585-4 Practicum in Rehabilitation Counseling
001 Arranged
SOCIOLOGY (SOC)
372-4 Criminology
E001
8:30-10:20 Tu Th PB 0304 Humphreys

## VOCATIONAL-TECHNIGAL INSTITUTE (VTI)

CCS 103-2 Child and Nutrition
CCS E401 $4: 30-6: 20$ ESL 211 Endres
CCS 115-2 Art and Music

| E401 | $4: 30-6: 20$ | Th | ESL 211 | Naylor |
| :--- | :--- | :--- | :--- | :--- |
| Lab | One hour arranged |  |  |  |

24 vocational-technical institute (vti)


## Course Descriptions

This section contains descriptions for courses offered in the previous section of this bulletin. Courses are listed numerically within each subject-matter area and in the same order in which they appear in the previous section.

## Man's Physical Environment and Biological Inheritance (GSA)

110-8 (4,4) The Earth and Its Environment. A study of the earth, its major domains and its space environment; student investigation of earth substances, processes and utilization of energy. An investigative approach for study of the observational and measurement techniques of the earth scientist. Lecture, laboratory, and individual study. Must be taken in a,b sequence. Prerequisite: one year of high school chemistry. 201-8 (4,4) Man's Biological Inheritance. Basic biological concepts are explored at levels of integration ranging from the molecular to the ecosystem. Topics include structure and function of cells and organisms, genetics, continuity of life, problems of populations, environmental control, evolutionary development, interrelationships between plants and animals. Must be taken in $\mathrm{a}, \mathrm{b}$ sequence. Prerequisite: high school or college chemistry.
312-3 Conservation of Natural Resources. A study of man's use and misuse of natural environment.
331-3 Climate. Description and interpretation of climatic regions and their influence on human activity. May take only 330 or 331 for General Studies credit.
363-6 (3,3) Philosophy of Science. (a) The logic of scientific explanation illustrated by analysis of physical concepts and theories. (b) The logic of explanation in the biological and behavioral sciences and their implications for the individual and society. Should be taken in a,b sequence.

## Man's Social Inheritance and Social Responsibilities (GSB)

101-8 (4,4) Survey of Western Tradition. (b) Political, economic, and cultural history of Europe from the Eariy Middle Ages to the end of the Napoleonic Age. (c) History of Europe from Congress of Vienna to the present.
103-8 (4,4) Sociology-Economics. An introduction to the great economists and sociologists and especially to those writers who are regarded as both. (a) An historical development of sociological ideas and introduction to such concepts as social structure, role behavior, and social institutions. (b) A historical development of economic ideas and an introduction to economic concepts, institutions, and problems. Should be taken in a, b sequence.
201-8 (4,4) The Individual and His Cultural Environment. A study of human behavior in the light of cultural and psychological processes. (a) Anthropology: An examination of the biological and cultural origins of mankind; cultural diversity and human behavior; characteristic features of tribal societies, including economy, social organization, language, art, religion, and political organization; place of non-industrialized societies in the modern world. (c) Psychology: Surveys modern psychological approaches to individual behavior; includes basic developmental processes such as learning and motivation plus a study of personality and related adjustment problems. Prerequisite: 101 or 103.
203-8 (4,4) American Politics in the World Environment. (a) The theory, organization, and operation of American government. (b) Analysis and interpretation of human geographic patterns; world population, settlement, economic activities. Meets State Constitution requirements.
300-9 ( $3,3,3$ ) History of the United States. A general survey of the political, social, and economic development of the United States. (a) 1492 to 1815 , (b) 1815 to 1900 , (c) 1900 to the present.
311-3 Economic Development of the United States. Emphasizes the underlying trends and forces of change that have led to our present
economic structure, level of performance, and world position. Prerequisite: 101 c or 103 b .
312-3 Comparative Eeonomic Systems. A comparative study of the goals, structure, and operation of the major economic systems, such as capitalism, socialism, and fascism. Emphasis upon basic systems of organization and control, and upon mixed economies.
331-3 The American Educational Systems. A critical and problematie study of education as a major social enterprise of a free society in its context of international involvements. The formative influences upon the American educational systems, its basic characteristics, difficulties and prospects are explored through the disciplines comprising the intel-lectual-cultural foundations of education. Designed for all students irrespective of major discipline or professional pursuit.

## Man's Insights and Appreciations (GSC)

151-3 Introduction to Poetry. Introduction to the enjoyment of poetry. Practice in techniques of critical reading and writing. Prerequisite: GSD 101a,b.
252-4 Logie. Study and practice in the analysis of verbal traps, relations between statements, deductive arguments, and inductive inferences. 253-4 Literary Masterpieees of Antiquity. Reading and discussion of selected literary texts from Classical and Hebraic Antiquity.
254-4 Philosophieal Masterpieees. Reading and discussion of selected philosophic masterpieces of Western civilization.
335-3 Studies in Short Fietion. The development of the short story as an artistic expression, its techniques, and its versatility, from the early 19 th century to the present.
363-6 (3,3) Philosophy of Science. (a) The logic of scientific explanation illustrated by analysis of physical concepts and theories. (b) The logic of explanation in the biological and behavioral sciences and their implications for the individual and society. Should be taken in $a, b$ sequence.

## Organization and Communication of Ideas (GSD)

101-6 (3,3) English Composition. Basic rhetorical principles in expository writing. Must be taken in a,b sequence.
103-3 Oral Communication of Ideas. The basic principles and techniques of oral communication as applied to everyday speech activities.
112-9 (4,5) Introduction to Mathematies. A study of logical rules of deduction: the real number system, and mathematical structures. Prerequisite: one year of high school algebra and satisfactory score on A.C.T. An alternative course for 114-9. Must be taken in a,b sequence. 114-9 (5,4) College Algebra, and Trigonometry. A logical study of the algebraic properties of number systems, polynomials, equations, functions, matrices, exponential and logarithmic functions, trigometric function. (a) principally algebra. (c) principally trigonometry. Prerequisite: high school intermediate algebra and plane geometry. An alternative course for 112-9. Must be taken in a, c sequence.
114d-4 Statisties. Descriptive statistics, probability distributions, sampling, statistical inference, regression and correlation. An alternative course for the second quarter of 114 . Prerequisite: 114 a.
126-9 (3,3,3) Elementary German. Open to students who have had no previous work in German. Must be taken in $\mathrm{a}, \mathrm{b}, \mathrm{c}$ sequence.
136-9 (3,3,3) Elementary Russian. No previous knowledge of Russian required. Must be taken in a,b,c sequence.
140-9 (3,3,3) Elementary Spanish. Open to students who have had no previous work in Spanish. Must be taken in a,b,c sequence.

## Health and Physical Development (GSE)

201-3 Healthful Living. Personal and community health. Presents scientific health information as a basis for developing wholesome health attitudes and practices.

## Accounting

230-4 Accounting Principles. Study of the basic accounting principles, concepts, conventions, and standards; their application to the analysis and recording of business transactions; and the reporting of the accumulated results. Measurement of income, and matching of expense with revenues through the use of the accrual basis in the accounting system. Prerequisite: sophomore standing.
231-4 Financial Aceounting Analysis. Introduction to valuation concepts of assets, liabilities, and ownership equities; control of cash, valuation of receivables, inventory valuations and price level changes, fixed asset
valuation of receivables, inventory valuations and price level changes, fixed asset valuation and depreciation policy, equity accounting and concepts, bonds, partnerships, and corporations; basics in financial statement analysis-use of ratios and their interrelationship with other factors; funds and cash flow concepts. Prerequisite: 230.
330-4 Managerial Cost and Budgeting. Control concepts, essentials of job order and process costing; budgets and budgeting for planning and control, standards and flexible budgets and use of "exception" principle through variance analysis; control of fixed costs, relevant cost analysis for managerial decision making, capital planning. Prerequisite: 231.
341-4 Cost Accounting Principles. Comprehensive study of job order and process cost systems, related joint and by-product costing, and estimated cost procedures. Prerequisite: 231.
351a-4 Accounting Theory and Problems I. Comprehensive study of the asset accounts, their valuation, presentation, and preservation. Prerequisite: 231 .
453-4 Advanced Accounting Problems. Comprehensive study of problems in consolidation of financial statements, partnerships dissolution and liquidation, consignment, installment sales, and other adranced accounting topics. Prerequisite: 351 b .
456-4 Auditing. Study of the concepts, principles, and practices of auditing, including ethics, professional standards, internal control, preparation of audit working papers, audit reports, and related services. Prerequisites: $351 \mathrm{~b}, 442$.
533-4 Managerial Accounting. Consideration of programs and techniques of internal control and reporting for management, cost concepts and applications, variable costing, cost-volume-profit relationships, budgeting concepts, and complex problems for managerial decision. Prerequisite: 530 .

## Art

050-3 Avocational Painting. An exploration of painting and drawing media for the interested non-major. Emphasis upon individual development of understanding and appreciation of painting media through direct experience in the practice of painting. May be repeated. Three hours credit applicable to degree except in art and design and teacher education.
051-3 Avocational Ceramics. An exploration of the ceramics arts for the interested non-major. Emphasis upon individual development of understanding and appreciation of pottery media through direct experience in the practice of the craft. May be repeated. Three hours credit applicable to degree except in art and design and teacher education.
408-4 Art Education for Elementary Teachers II. Fol the teacher of exceptional children (Special Education). Studio techniques and special motivational procedures.

## Biology

423-4 Principles of Parasitism. Principles dealing with parasitic relationships. Includes study of types of association, morphologic and physiologic adaptations of parasites, defensive mechanisms, immunity, and specificity. Selected examples from the plants and animals are used to illustrate the general principles and life histories. Two lectures and two laboratories per week. Prerequisite: $302 \mathrm{a}, \mathrm{b}, \mathrm{c}$.
524-3 Biogeography. Concepts and principles relating to patterns of plant and animal distribution on a continental and world-wide basis. Prerequisite: 303c.

## Business Administration

544-4 The Methodology of Business Research. Basic concepts and techniques appropriate to research for business; research as a basis for creative decision-making in diverse business situations. Formulation of hypotheses; development of appropriate models and methodology for testing of hypotheses; presentation of research results; cvaluation of the research results of others. Students are assigned in designing individual and group research projects having relevance for later seminars. Prerequisites: Quantitative Methods 510, 511; Management Operating Systems 580 .
548-4 Seminar in Managerial Performance. Deals in depth with a limited range of current problems and developments in management development, compensation, management by objectives, task-team leadership, and sensitivity training. Emphasis on the planning and leadership roles of management. Selection of topics is guided by the interests of the students and instructor. Prerequisite: $5+3$.

## Business Communications

390-4 Business Communications. Designed to improve understanding of the vital role of effective communication in business and to develop skill in business writing with emphasis on the preparation of reports. Provides an opportunity to learn effective use of a business library; to collect and interpret data; to present information in a logically organized and acceptable form.

## Business Education

324a-4 Advanced Shorthand and Transcription. The development of high-level dictation and transcription skill and knowledge. Prerequisites: 221c or three semesters of other formal instruction in shorthand-transcription and the ability to transcribe on the typewriter new-matter dictation taken at a sustained rate of 80 words per minute.
351-4 Foundations of Business Education. The role of the business teacher in the secondary and post-secondary school. An analysis of business education objectives and curriculum. A survey of trends and external influences as they affect business education.
404-3 Teaching Shorthand and Transcription. Instructional procedures, skill-building principles and techniques, selection and preparation of instructional materials, standards of achievement, and evaluation of pupil performance. Prerequisite: 324a.
414-6 (3,3) Organization and Administration of Cooperative Vocational Business Education Programs. Philosophy and objectives of cooperative vocational programs, methods of selecting students and work stations, placing and supervising students on part-time jobs, preparation of instructional materials, job analyses, conducting related information courses, evaluating workers and work stations, advisory committees, and public relations aspects of cooperative programs.

## Chemistry

111-15 (5,5,5) Chemical Principles and Inorganic Chemistry. (a) Nature of matter, gas laws, periodic classification, laws of combination, chemical calculations. Students with an excellent record in high school chemistry may be able to start with (b). Three lecture, one quiz, and three laboratory hours per week. Prerequisites: high school algebra and geometry or equivalent; (b) solutions, kinetics, equilibrium, electrochemistry, and chemistry of the elements. Three lecture, one quiz, and three laboratory hours per week. Prerequisite: 111a or strong background in high school chemistry; (c) continuation of chemistry of the elements, ionic equilibria, and qualitative analysis. Three lecture and six laboratory hours per week. Prerequisite: 111b.
432-8 (4,4) Instrumental Analytical Measurements. Theory and practice of instrumental analytical measurements, including spectrophotometric, electroanalytical, and chromatographic methods. Two lecture and six laboratory hours per week. Prerequisite: 461b. May be taken concurrently.
446-4 Qualitative Organic Analysis. A systematic study of the separation and identification of organic compounds by a procedure based on solubility and classification reagents. Two lecture and six laboratory hours per week. Prerequisite: 305b or 341 c.
451-6 (3,3) Biochemistry. (a) Carbohydrates, fats and related substances, proteins and amino acids, enzymes, digestion, absorption, and detoxication. (b) The blood and lymph; acid-base regulation; metabolism of carbohydrates, lipids, and proteins; urine; calorimetry and energy metabolism; nutrition, vitamins, and hormones. Three lecture and three laboratory hours per week. Must be taken in a,b sequence. Prerequisite: 235 and 305 b or 341 c .
511-3 Advanced Inorganic Chemistry. Lecture. A theoretical and empirical treatment of chemical bonding and molecular structure.

## Counselor Education

305-4 Educational Psychology. Study of the learner and the learning process. Includes study of behavior, discipline, development, the school environment, application of learning theories, and methods of assessment. Pre requisite: GSB 201c.
420-4 Educational Statistics. The statistics needed by teachers for classroom use, the reading of educational literature, and informal educational research. Includes methods of organizing and presenting data, describing group performance, describing individual performance, model distributions, measure of relationship, measures of reliability, and tests of significance. Prerequisite: 305.
422-4 Educational Measurements I. Study of the philosophy and tech- of teacher-made tests. Prerequisite: 305 .
510-4 College Student Personnel Services. An overview of the student personnel program in higher education for the beginning graduate student. Various types of organizational structures in higher education. Description and discussion of the functions of college student personnel programs, with emphasis on the organizational relationships of the various functions. Prerequisite: admission to program.
511-4 Educational Implications of Learning Theories. Survey of the major theories of learning. Emphasizes the implications of these theories for classroom practice. Prerequisite: advanced standing.
515-4 Psychological Aspects of Education. Designed to survey the applications of psychology to educational settings. Prerequisite: advanced standing.
522-4 Educational Measurements II. Study of standardized tests and other measuring devices to reveal individual and group characteristics. Emphasizes application and interpretation for counseling, education, and research purposes. Prerequisites: 420,422 .
525-4 School Behavior Problems and Their Prevention. A survey of the approaches to the study of personality-developinent and socialization of the school child. Methods used in the correction of behavior problems are considered. Prerequisite: consent of instructor.
528-4 Advanced Guidance of the Individual. A continuation of 526. Techniques and the methods of treatment which would apply to a particular case. Problems for consideration: educational difficulties, physical disorders, and the ways in which these are related to behavior of school children. Prerequisite: 526.
537-4 Counseling Theory and Practice I. Systematic study of the major approaches to counscling. Ohservation and practice utilized to supplement didactic discussion. Prerequisites: $412,542$.
538-4 Counseling Theory and Practice II. Systematic study of major theories of counseling as they apply to school situations. Supervised experience in role-playing or laboratory experience utilizing these approaches to counseling. Prerequisite: 537 .
541-4 Occupational Information and Guidance. Designed for school counselors, industrial supervisors, and teachers to give an orientation to and experience with occupational information and vocational adjustment.
542-4 Basic Principles of Guidance. Introductory course on student personnel services. Survey of philosophy, principles, and organization of guidance services. Prerequisite: 305 .
543-4 Guidance Through Groups. Study of the methods, techniques and materials for the organization and utilization of groups for guidance purposes.
545-4 Seminar. (f) Pupil Adjustment. Analysis of various concepts of adjustment and their behavior implications. (j) Organization and Administration. Analysis of principles, procedures, and plans necessary for initiating, developing, and appraising a school guidance program.
562-8 (4,4) Human Development in Education. Theories and research evidence regarding child development and behavior are investigated. These considerations focus upon implications for research and educational practices. (a) Childhood. Prerequisite: advanced standing. (b) Adolescence. May be taken in a,b sequence.
575 c-1 to 12 Practicum in Secondary Guidance. Supervised experience in guidance functions. Includes counseling with secondary school pupils, conducting parent interviews, consulting with teachers, and the collection and dissemination of information.

## Economics

200-4 Macroeconomics. An introduction to national economic systems with attention to the meaning and measurement of national income, and the causes of fluctuations therein. National economic objectives and policies, including the distribution of income, the level of employment factors affecting stability and growth, the role of taxation. Prerequisite: sophomore standing.
201-4 Microeconomics. Principles and characteristics of the market economy. Theory of the business firm, supply, demand, and prices. Analysis of earnings of productive resources, including wages, rent, interest, and profit. Introduction to market structure and public policy. Prerequisite: sophomore standing.
300-4 The Monetary System and Economic Policy. Study of relationships between money, credit, prices, and economic activity. How the banking system creates money; the Federal Reserve System. Introduction to public finance and fiscal policy; the role of public finance in full employment policy. Introduction to international financial relationships. Prerequisite: 200.

429-4 International Economics. Intensive treatment of the principles of international economics with special emphasis on the classical and modern theories of international trade. Income effects and balance of payment theory. Prerequisites: 200, 201.
440-4 Intermediate Micro Theory. An intensive treatment of price and income theory with emphasis on degrees of price and other competition. Prerequisite: 201.
$450-6$ (3,3) History of Economic Thought. The development of economic thought; (a) ancients to 1850 ; (b) 1850 to present. Must be taken in a,b sequence. Prerequisites: 200, 201.
465-4 Mathematical Economics I. A systematic survey of mathematical economic theory. Conditions of static equilibrium (including stability conditions), dynamic models using difference equations, and linear production models of input-output analysis and activity analysis (linear programming). Prerequisite: 440, consent of instructor.
541-4 National Income Theory. Keynesian and post-Keynesian developments in national income theory. Empirical research concerned with characteristics and magnitudes of important national income concepts, such as the consumption function, is examined. Recent American policies and problems bearing on national income fluctuations are considered. Prerequisite: 441 or consent of instructor.

## Educational Administration

355-4 Philosophy of Education. The philosophical principles of education and the educational theories and agencies involved in the work of the schools. Prerequisite: Counselor Education 305.
420-4 Legal Basis of American Education. Particular emphasis is placed on common law principles.
431-4 History of Education in the United States. An historical study of the problems of American education which have relevance to contemporary education.
434-4 Administrator's Workshop. A special program for the consideration of administrative problems pertinent to superintendents, high school principals, and elementary school principals.
456-4 School Supervision. The function of the principal or supervisor in the improvement of instruction. Some activities, methods, and devices for improving the effectiveness of teaching.
480-4 Backgrounds of Urban Education. (See also Elementary Education 480 and Secondary Education 480.) Social, economic, and demographic factors as they impinge upon programs in urban schools. Prerequisite: consent of instructor.
500-4 Research Methods. Introduction to educational research with practical training in research writing techniques and evaluation in education.
501-4 Seminar in Educational Administration. The interdisciplinary approach to the study of the theory of educational administration. Open to students in approved sixth year and doctoral programs only.
502-4 Seminar in Comparative Education. Educational ideas and practices of various countries of the world, both Eastern and Western, and their impact upon our culture and education.
503-4 Seminar in Philosophy of Education. An interpretation of modern educational problems and trends in the light of basic philosophical viewpoints. Excerpts from leading writings will be used. Prerequisite: 554 or equivalent.
524-4 School Administration. Designed primarily for those who look forward to positions as supervisors, principals, or superintendents.
533-4 School Buildings. Various phases of physical plant design and maintenance of concern to the school administrator.
534a-4 School Finance. A study of the principles and issues of public school finance. Revenues, expenditures, indebtedness, and fiscal controls are dealt with.
551-4 Community Junior College Curriculum. Expanding curricula of the community junior college. College parallel, occupational technical, general developmental, and adult and community service programs critically analyzed. Investigation of techniques of curriculum development that implement desirable program changes. Prerequisite: 565 or consent of instructor.
554-4 Contrasting Philosophies of Education. Deals both historically and contemporaneously with the ideologies which have developed from different concepts of education. Prerequisite: 355 or Philosophy 355 or equivalent.
560-4 Curriculum. Modern practices and procedures in curriculum development, with attention to the professional, social, economic, and other major factors, in curriculum planning.
565-4 The Community Junior College. Survey of the community junior

575-1 to 4 Individual Research. Selection, investigation, and writing of a research assigmment under the personal supervision of a graduate faculty member in one of the following areas: (a) curriculum, (b) supervision, (c) buildings, (d) finance, (e) school law, (f) comparative education, (g) history of education, (h) philosophy of education, (j) administration, (k) elementary administration. Prerequisite: 500, approval of department adviser and consent of instructor.
396-5 to 9 Independent Investigation. Field study required of each student working for the sixth-year specialist certificate.

## Elementary Education

314-4 Elementary School Methods. The fundamental principles of education, the interpretation of current educational theory and practice, the processes of teaching and learning involved in elementary education. Prerequisites: Counselor Education 305, Educational Administration 355. 316-4 Kindergarten-Primary Methods and Curriculum. Plilosophy and principles underlying the teaching of four-to-eight-year-olds. Emphasis upon organization, equipment, materials, and methods for promoting growth of young children. Prerequisites: Counselor Education 305, Educational Administration 355.
337-4 Reading in the Elementary Schools. The principles of reading, factors that condition reading, together with grade placement of aims and materials; diagnostic and remedial treatment. Prerequisites: Counselor Education 305, Educational Administration 355, Elementary Education 314.
413-4 Children's Literature. Emphasizes types of literature, analysis of literary qualities, and selection and presentation of literature for children. Not for students who have had English 213. Prerequisite: Counselor Education 305.
415-2 to 4 Improvement of Instruction in Arithmetic in the Elementary School. Items to be taught, the grade placement of content, newer instructional practices and materials of instruction, and means of evaluating achievement. Prerequisites: 314 , GSD 112.
437-4 Problems in Reading. Practices and trends in the teaching of reading; materials of instruction in reading, particularly remedial materials; techniques and materials for prevention of reading difficulties; diagnosis and remediation of reading difficulties. Prerequisites: 337 and senior standing. Not open to students having had 505.
442-4 Science for the Elementary Teacher. Study of content and methods of elementary school science.
480-4 Backgrounds of Urban Education. (See Educational Administration 480.)
505-4 Improvement of Reading Instruction. First course in the reading sequence. Survey of reading problems, aspects of the reading process, modern practices in teaching reading.
507-2 to 4 Readings in Reading. Independent reading; acquaintanceship with the literature and research in reading. Conference periods. Prerequisite: 505.
509-4 to 8 Practicum in Reading. For advanced students; teaching demonstrations and evaluations. Each student works with a group of reading disability cases.
514-4 Organization and Administration of Reading Programs. For reading specialists, principals, supervisors, consultants. Recent trends in elementary and high school reading programs, providing reading instruction for total school population, materials and equipment, in-service training, role of the reading specialist. Problems of class nembers are studied and discussed. Prerequisite: 561.
521-12 (4,4,4) Diagnosis and Correction of Reading Disabilities. Causes of reading difficulties; observation and interview procedures; standardized tests, instruments, and informal inventories; analysis techniques; experiences in preparing materials for corrective purposes. Each student diagnoses and treats a reading disability case under supervision. Prerequisite: 505.
542-4 Language Arts in the Elementary School. The practical bearing of investigation and theory on the improvement of current practices in the teaching of the language arts other than reading. Attention given to evaluation of teaching inaterials in these areas.
543-4 Teaching the Social Studies in the Elementary School. Organization of material for teaching purposes, techniques of classrom presentation, bibliographies or materials, use of audio and visual aids to instruction, and techniques for evaluating student progress. Readings, lectures, and discussions related to required teaching experience.

557-4 The Elementary Principalship. Designed to meet many of the particular needs of persons interested in qualifying for appointments as clementary school principals. Other than the administrative responsibilities of the elementary principal, such topics as the grouping of pupils, the elementary school's program, and personnel are studied.
561-4 The Elementary School Curriculum. A critical study of the reorganization, construction, and administration of the elementary school curriculum, and the installation, adaptation, and administration of the revised curriculum.
567-12 (4,4,4) Teaching Competencies and Their Application. Individualized and flexible group study of teaching behavior in competency centers. Skills are developed, applied, and tested in simulated or field settings.
575-2 to 4 Individual Research. The selection, investigation, and writing of a research topic, under the personal supervision of a member of the departmental graduate staff, in one of the following areas: (a) curriculum, (b) supervision, (c) language arts, (d) science, (e) reading, (f) social studies, (g) problems in elementary education, (h) arithmetic, (j) problems in kindergarten-primary, (k) elementary education administration and supervision.
596-5 to 9 Independent Investigation. Field study required of each student working for the sixth year specialist certificate. The work should be done in the setting of a school system where the student is employed or wherc full cooperation is extended. The study involves selecting of the problem, survey of pertinent literature, recording of results, and appropriate interpretations and summarizations.
597-1 to 3 Thesis. Minimum of 5 hours to be counted toward a master's degree.

## Secondary Education

315-4 High School Methods. Study and discussion in various types of procedures used for effective classroom teaching. The problem approach and unit method are stressed. Prerequisite: Educational Administration 335.

407-4 The Junior High School. The place of the junior high school in the organizational pattern, with major cmphasis upon the areas of organization, administration, and curriculum.
480-4 Backgrounds of Urban Education. (Same as Elementary Education 480.) A study of social, economic, and demographic factors as they impinge upon programs in urban schools, particularly those in the inner city. Prerequisite: consent of instructor.
505-4 Improvement of Reading Instruction. First course in the reading sequence. Survey of reading problems, aspects of the reading process, modern practices in teaching reading.
507-2 to 4 Readings in Reading. Independent reading; acquaintanceship with the literature and research in reading. Conference periods. Prerequisites: 505 , consent of instructor.
508-4 Seminar: Trends in Selected Areas in Secondary Schools. For students in advanced graduate work. Individual class members will read basic bibliography related to secondary education and read widely about trends in the area of their own teaching fields. Prerequisites: completion of half or more of the work leading to a master's degree and consent of the instructor.
509-4 to 8 Practicum in Reading. For advanced students; teaching demonstrations and evaluations. Each student works with a group of reading disability cases. Prerequisites: $521 \mathrm{a}, \mathrm{b}, \mathrm{c}$, and consent of instructor.
514-4 Organization and Administration of Reading Programs. For reading specialists, principals, supervisors, consultants. Recent trends in elementary and high school reading programs, providing reading instruction for total school population, materials and equipment, in-service training, rolc of the reading specialist. Problems of class members are discussed. Prcrequisites: Educational Administration 561, 505.
521-12 $(4,4,4)$ Diagnosis and Correction of Reading Disabilities. Causes of reading difficulties; observation and interview procedures; standardized tests, instruments, and informal inventories: analysis techniques: experiences in preparing materials for corrective purposes. Each student diagnoses and treats a reading disability case under supervision. Prerequisite: 505.
562-4 The High School Curriculum. Designed to permit students to work in groups on problems related to the high school curriculum. Such problems should originate in the schools where the students are or will be employed. The point of view maintained is that procedures should be very democratic. The instructor serves as a coordinator of activity; resource people are used freely. Prerequisite: one other graduate course in curriculum.

567-12 (4,4,4) Teaching Competencies and Their Application. Individualized and flexible group study of teaching behavior in competency centers. Skills are developed, applied, and tested in simulated or field settings.
575-2 to 4 Individual Research. The selection, investigation, and writing of a research topic, under the personal supervision of a member of the departmental graduate staff, in one of the following areas: (a) Curriculum, (b) Supervision, (c) Language Arts, (d) Science, (e) Reading, (f) Social Studies, (g) Problems in Secondary Education, (h) Higher Education, (j) Junior College.
596-5 to 9 Independent Investigation. A field study required of each student working for the sixth-year professional certificate. The work should be done in the setting of a school system where the student is employed or where full cooperation is extended. The study will involve selecting of the problem, survey of pertinent literature, recording of results, and appropriate interpretations and summarizations.
597-1 to 3 Thesis. Minimum of 5 hours to be counted toward a master's degree.

## Special Education

410b-4 Problems and Characteristics of the Mentally Retarded. Objectives, curriculum, methods, and materials of instruction for slow learners. Emphasis upon the principles of learning as they can be applied to this group. Observations. Prerequisite: Counselor Education 305 or Psychology 301 or 303.
414-4 The Exceptional Child. Physical, mental, emotional, and social traits of all types of exceptional children. Effects of handicaps in learning situations. Methods of differentiation and techniques for rehabilitation. Individual case studies used; observations and field trips. Prerequisite: Psychology 301 or 303 or consent of instructor.
481a-4 Seminar: Emotionally Disturbed. Focuses on classroom management, dynamics of behavior and behavior modification through a systematic learning theory approach. Prerequisite: 410a and consent of instructor.
481b-4 Seminar: Educable Mentally Handicapped. Emphasizes special problems of the retarded, issues in curriculum planning and implementation and techniques for establishing effective school-home and schoolcommunity relations as they apply to retarded children. Prerequisites: 410 b and consent of instructor.
481c-4 Seminar: Gifted. Considers issues such as special courses, regular class placement of the gifted, curriculum provisions, identification and guidance of the gifted. Prerequisites: 410 c and consent of instructor.
496-1 to 8 Readings in Special Education. Study of a highly specific problem area in the education of exceptional children. Open only to selected seniors and graduate students. Prerequisites: 414, consent of staff.
501-4 Special Research Problem. For concentrations and secondary concentrations in the field of special education. Choosing and conducting research activities. The student to select a topic for research and present it, upon completion, to the staff. Prerequisite: consent of staff. 513-4 Organization, Administration, and Supervision of Special Classes. Emphasis upon the functions, underlying principles, and cautions to be observed in the organization and administration of special classes. The selection and training of teachers, problems of supervision, special equipment, transportation, cooperating agencies, and legal aspects of the problem. Prerequisite: 414.
518-4 Workshop in Special Education. Designed to promote better understanding of the psychological and educational problems of atypical children. Specialists used as consultants. Open to graduate students majoring in education, guidance, or special education. Prerequisite: 414.
590-12 (4,4,4) Seminar: Mental Retardation. Critical review of administrative practices, research, theories and etiological factors relevant to programs in the education of children who are mentally retarded or gifted. Implications of research in related disciplines. Application of theories to practice. Open to advanced graduate students in special education only.

## Engineering

101-9 (3,3,3) Engineering Graphics. (a) Basic principles of graphic communications. Pictorial projection, sections and conventions, dimensioning auxiliary views, freehand lettering, and sketching. (b) Graphical solution of problems involving the understanding of the space relationships of points, lines, and planes; intersections and developments. (c) Auxiliary views, threads and fasteners, dimensioning. Laboratory must be taken in a,b,c sequence.

523-3 Digital Simulation Techniques. Advanced course in compute applications. The use of digital computers to simulate complex stochastic systems. Variance reduction techniques. Prerequisite: 420 or consent o instructor.
524-6 (3,3) Linear and Non-Linear Programming. Optimization techniques for processes with linear and nonlinear constraints. The application of operations research principles, gradient methods, game theory peak-seeking methods, and dynamic programming to management and control problems. Prerequisite: bachelor's degree in mathematics, natural science, or engineering.
560-8 (4,4) Automatic Control Theory. Principles of feedback control applied to linear, lumped parameter systems analysis using Nyquist, Bode, rootlocus, phase plane; stability criteria. Use of control theory in automated industrial processes and instrumentation; engineering examples and projects. Prerequisite: bachelor's degree in mathematics, natural science, or engineering.

## English

300-4 Principles of English Grammar. Required for English students. Others should take 391. Credit not allowed for both courses.
302-12 (4,4,4) Survcy of English Literature. (a) to 1550, (b) 15501750, (c) after 1750. May be taken in any sequence.
309-8 (4,4) Survey of American Literature. (a) to 1860, (b) since 1860. May be taken in either sequence.

391-3 Usage in Spoken and Written English. Usage and structure of English. Prerequisite to student teaching, except in English concentrations, which require 300 .
404-12 (4,4,4) Middle English Literature. (a) Middie English literature excluding Chaucer; (b) Chaucer: early poems and Troilus; (c) Chaucer: Canterbury Tales. May be taken separately.
405-8 (4,4) Descriptive Linguistics. (a) Phonetics and phonemics, an analysis of language structure from phone to phoneme; (b) morphology and syntax, an analysis of language structure from morph to sentence, with emphasis on immediate constituent analysis. May be taken separately. Prerequisite: consent of instructor.
458-8 (4,4) American Fiction. (a) The novel in America from its beginnings to the early 20 th century, (b) trends and techniques in the American novel and short story since 1914. May be taken separately. 486-2 to 8 Workshop in High School English. Intensive study in lectures, laboratory, and conferences, on the teaching of English in high school. Curriculum, materials, methods, aims.
500-4 Materials and Methods of Research in English. The principal tools of literary scholarship and the more important studies and journals. Practice in the preparation of selective bibliographies and scholarly reports.
580-4 Traditional Themes. Persistent themes and legends in literatureKing Arthur, Faust, Utopia, and the like.

## Finance

320-4 Corporation Finance. A study of the principal duties of corporate financial officers and the problems of administrative financial management of business. Topics include planning, budgeting and control, external sources of capital. Prerequisites: Accounting 230, 231; Economics 200, 201.
424-4 Financial Institutions. A study of the evolution, functions, and practices of the many types of financial intermediaries especially which have come into prominence since World War II and particular attention is given to commerce and government.
520-4 Finance., Basic aspects of business finance. Sources of capital, short- and long-term financial planning and policy-making, the impact of the banking systems and of money or capital markets on business finance. Restricted to Master of Business Administration students.

## Foreign Languages

## German

126-3 (1,1,1) German Conversation. Conversation and oral drill taken with GSD 126 by students who wish additional oral training: elected only by students enrolled in GSD 126. May be taken separately.

## Italian

201-9 (3,3,3) Intermediate Italian. Development of listening, speaking, reading and writing skills on the intermediate level, with special attention to the role of Italian culture in world civilization. Prerequisite: GSD 144, or two years of high school Italian, or equivalent.

20-6 (2,2,2) Intermediate Italian Conversation. Development of oral kill on an intermediate level. Prerequisite: Italian 201c or concurrent egistration in any quarter of 201 .

## Russian

36-3 (1,1,1) Russian Conversation. Conversation and oral drill taken with GSD 136 by students who wish additional oral training; clected only by students enrolled in GSD 136. May be taken scparately.

## Spanish

(40-3 (1,1,1) Spanish Conversation. Conversation and oral drill taken vith GSD 140 by students who wish additional oral training; clected only by students enrolled in GSD 140. May be taken separately.

## General Business Administration

140-4 Introduction to Business. An overview of the basic nature of busihess in an essentially market-disciplined economic system. Emphasis on he interdisciplinary nature of business and the broad administrative orinciples governing organized human endeavor. Introduction to busiress and economic terminology and to the case method of developing nalytical ability.
30-4 Organizational Behavior and Decision-Making. Development of anderstanding of organizational behavior and decision theory and of nalytical skills through case analysis and discussion. Examination of orocesses of group formation and development, conformity and direcion, influence and decision-making, problem solving, role specialization and differentiation, status and social power distribution, satisfaction, and zoal internalization and commitment. Prerequisites: 140 and GSB 201 ,b,c.
31-4 Organizational Problems. Application of the concepts, undertanding, and techniques to major catcgories of recurring organizational oroblems faced by complex business units and described in case situaions. Features such as position specifications, authority structures, teritorial imperatives, performance measurements, and procedures involvng compensation, communication, and employee selection and promoion. Designing organizational patterns to meet specific situational reeds. Prerequisite: 340.
42-4 Contracts-Agency Law. Study and discussion of the terminology, lefinitions, and principles of contract law applicable to the contractive roblems in the operation of a business, including the relevant provisions f the uniform commercial code. The application of the principles of agency law by the cntrepreneur in operating his firm, and his legal iability to his agency and third parties with whom he deals.
140-4 The Legal Environment of Business. Varied facets of the cxternal nd internal legal environments within which business firms operate. Use of cases and readings which describe and analyze the legal framevork supporting, facilitating, and guiding everyday busincss decisions. Common law, statutory law, and administrative law as they affect the pusiness environment. Prerequisitc: 140.

## Geography

105-7 (4,3) Advanced Economic Geography II. Content drawn from ame broad range of topics as 404 . To be alternated with 404 to cnable tudent to specialize further in economic geograplay. Prercquisite: 302 or consent.
190-1 to 2 ( 8 total) Tutorial in Geography. Individual and small group conferences with staff members to examine geographic concepts.
301-4 Geographic Techniques II. Emphasizes the conceptual framework f geography, library and bibliographic techniques, and geographic writng.
99-2 to 9 Thesis. Minimum of 5 hours to be counted toward a master's degree.

## Government

330-2 Illinois Government. The development and functioning of governnent in Illinois
350-12 (4,4,4) The Political Systems of Major European States. (a) A comparative study of the British and German political systems. (b) An analysis of the French and Italian political systems. (c) An examinaion of the organization and operation of the Soviet political systcm. Prerequisite: 200.
110-4 Quantitative Methods in Political Science (Same as Geography 410.) Statistical and computer research techniques for political scientists.

## Health Education

313s-4 Introduction to Safety Education. Preparation for safety education in the public schools. Concerned with safety as a social problem, development of safety skills, accident causes, teacher liability, and research in the field.

## History

102-4 Survey of Asian Civilization. An introduction to the history of East Asia from the earliest times to the twentieth century. Emphasis on China and Japan.
372-8 (4,4) History of Russia. (a) To 1905. (b) Since 1905. May be taken separately or in any sequence. Prerequisite: GSB 101b,c.
452-3 Hisiorical Research and Thesis Writing. The rules of historical research studied and applied to a definite topic. For history majors only. 500-3 to 9 History Seminar. (a) American history, (b) European history, (c) Latin American history.
534-4 Eighteenth-Century England. Introductory lectures and discussion of aspects of 18th-century English political, constitutional, economic, and social history.

## Humanities

302-3 or 4 Humanities Honors. Prerequisite: completion of the secondlevel General Studies courses and invitation of the Humanities Honors Program Committec. Accepted in lieu of third-level GSC requirement.

## Instructional Materials

308-4 School Library Technical Processes. Organization of library materials for effective service. Acquisition, classification, cataloging, preparation, preservation, and circulation. Laboratory assignments.
403-4 School Library Functions and Management. Effective library services in relation to the educational objectives of elementary and secondary school programs: organization, supervision, finance, housing, equipment, standards, and evaluation.
413-4 Cataloging Non-Book Materials. The classification, cataloging, preparation and circulation of all types of non-book material such as films, filmstrips, slides, realia, etc. Prerequisite: 308.
417-4 Audio-Visual Methods in Education. Selection and utilization of instructional materials in the learning environment, elementary through adult levels. Audio and visual materials and procedures are emphasized with some attention given to bibliographies and reference books for teachers.
445-4 Preparation of Teacher-Made Audio-Visual Materials. Laboratory practice in the preparation of bulletin boards, opaque materials, models, slides, recordings, feltboards, and other graphic materials. Prerequisite: 417 or consent of instructor.
470-4 Programmed Instruction. The principles and practice of writing both linear and intrinsic types of programmed instruction with emphasis on pictorial and performance branches. Individual experience in planning and producing programs.
514-4 Survey of Research and Developinent in Instructional Materials. Advanced readings in research in instructional materials and the practical application of findings. Prerequisites: 405, 406, 417 or consent of instructor.
546-4 Integration of Audio-Visual Materials in the Classroom. Selection of materials on the basis of curricular needs. Techniques of evaluating each type of audio-visual material for use in the classroom. Structured for both the audio-visual administrator and the class room teacher. The principles and practices of integrating audio-visual materials into the curriculum are discussed, also the problems, annotations and classification of evaluated materials. Prerequisites: 417, consent of instructor.

## Management Operating Systems

281-4 Principles of Computer Programming. A comparative study of stored program concepts, binary coding principles, study of machine language and symbolic coding; definition of problem and preparation of flow charts and block diagrams. Work involves practice problems requiring the preparation of flow charts, block diagrams, coding, preparation of source programs, and test running on computer equipment. Prerequisite: consent of instructor.
380-4 Management Operating Systems I. A study of organizational decision making within the concept of systems with emphasis on informa-
tion flows, decision centers and the application of data processing techniques. A major portion of the course is student development of an information, decision-making, and control system for a specific smallscale business enterprise. The computer is used. Prerequisite: Accounting 231.
381-4 Management Operating Systems II. A study of the complexities involved in the simultaneous integration of several sub-systems. Teams of students design company or corporate-wide management operating systems. The computer is used. Prerequisites: Accounting 341, Marketing 452, Production 460, and senior standing.
580-4 Management Systems. Design and usage of comprehensive, com-puter-based systems for managerial decision-making and control. A basic understanding of a computer programming language is included. Restricted to Master of Business Administration students.
583-4 Advanced Management Systems. Development of ability to think clearly about management systems. Learning to view simultaneously the overall business organization as a system, and the sub-systems of informa-tion-flow which are elements of the business system. Bridging of the gap between the ideal management system and the operational, practical, real-world business systems with its variety of sub-systems a basis for drawing conclusions, formulating alternative courses of action, and making decisions. Prerequisites: 580, Quantitative Methods 510, 511.

## Marketing

370-4 Consumer Behavior. An interdisciplinary approach to the analysis and interpretation of consumer buying habits and motives and the resultant purchases of goods and services. The purchaser's psychological, economic, and sociocultural actions and reactions are stressed as they relate to a better understanding of consumption. Prerequisites: GSB 103b, GSB 201c, Economics 201, and Quantitative Methods 211.
371-4 Principles of Marketing Management. An introductory survey of the problems encountered by the marketing executive and the analytical and evaluative systems available which can be used to improve his operating efficiency. Emphasis is placed on the use of marketing management factors in the areas of markets, products, distribution, price and promotion. Prerequisite: 370 .
471-4 Advertising Policy and Management. Advertising strategy, planning, and research and their relationship to other marketing tools. Emphasis on problems faced by marketing and business executives in administering the advertising effort. Prerequisite: 470.
472-4 Sales Policy and Management. An examination of the organization of the sales effort and of functions of salesmen and sales managers (including all echelons from the general marketing managers to the territory salesmen). Problem areas such as sales department organization, recruitment of salesmen and their motivation and supervision, design and administration of sales territories, appraisal of salesmen's performance. Prerequisite: 470.
473-4 Advanced Marketing Management. Development of the student's ability to identify marketing problems, investigate alternative solutions, and render decisions. Should be the final marketing course taken by the undergraduate marketing major. Prerequisite: senior standing.
573-4 Marketing Policies. Primary emphasis on managerial aspects of the marketing function including product, research, promotion, pricing, and channel strategies. Relationships to other business functions, to the legal environment, and to information technology as used by marketing managers. Some attention to quantitative methods of decision-making as applied to marketing.

## Mathematics

150-8 (4,4) Elementary Calculus and Analytic Geometry. Elementary differential and integral calculus with analytic geometry and applications. Includes the definite integral and differentiation of transcendental functions. Must be taken in $\mathrm{a}, \mathrm{b}$ sequence. Prerequisite: GSD 114 c .
305-8 (4,4) Applied Mathematics for the Physical Sciences. (a) Ordinary differential equations, linear algebra, and applications. (b) Additional topics in applied mathematics such as finite difference methods; Laplace transforms, and Fourier series. Must be taken in $a, b$ sequence. Prerequisites: 252 b and Physics 211 c .
410-16 (4,4,4,4) Statistical Analysis. For students in fields using statistical methods but not required to take calculus. Includes (a) elements of probability, estimation, and testing hypotheses; (b) the general linear model (multiple linear regression, analysis of variance, analysis of covariance) and non-parametric statistics; (c) design of experiments; (d) sample survey techniques. May not be used to satisfy requirements for a mathematics concentration. Three lectures and two laboratory
hours per week. Must be taken in either $\mathrm{a}, \mathrm{b}, \mathrm{c}, \mathrm{d}$ or $\mathrm{a}, \mathrm{b}, \mathrm{d}, \mathrm{c}$ sequence. Prerequisite: GSD 11 ta.
420-6 (3,3) Fundamental Concepts of Algebra. Introduces abstract algebraic structures including groups, rings, fields, and vecter spaces. Must be taken in a,b sequence. Prerequisite: 321.
421-6 (3,3) Linear Algebra. The theory of determinants and systems of linear equations; vector spaces, linear independence, bases, dimension; linear transformations, change of base, similarity; quadratic and Hermitian forms, orthogonal and unitary transformations; triangular and diagonal form; eigenvalues and eigenvcctors; normal matrices; milpotent and idempotent matrices, the spectral theorem. Must be taken in $\mathrm{a}, \mathrm{b}$ sequence. Prerequisite: 252b.
446-2 to 10 Structure of Mathematics. Designed to assist experienced teachers in extending their understanding of mathematics. (a) Elementary School Mathematics, (b) Junior High School Mathematics. Does not count credit toward a mathematics concentration. Prerequisites: experience in teaching and consent of instructor.
455-9 (3,3,3) Advanced Mathematics for the Physical Sciences. Introduction to various topics such as complex variable theory with applications, operational calculus (Laplace and other transforms), vector field theory, and partial differential equations. May be taken separately or in any sequence. Prerequisite: 305 b or consent of instructor.
458-6 (3,3) Finite Mathematics. An introduction to topics in finite mathematics such as logic, sets, probability, linear algebra, and Markov chains. Designed for students preparing for high school teaching and for advanced students in the behavioral sciences. Prerequisite: 252a or consent of instructor.
472-9 (3,3,3) Computer Science. An introduction to computing systems and the mathematics of computation. (a) Computer organization, design, and programming systems. (b) Linear system problems, linear programming and network problems. (c) Digital simulation problems, linear and other probabilistic problems. Prerequisites: 225, 305a, and 321.

483-9 (3,3,3) Introduction to Mathematical Statistics. A mathematical development of the elements of statistical theory. (a) Probability distributions, generating functions, and limit theorems. (b) Statistical inference, estimation, tests of hypothescs, general linear hypotheses. (c) Design of experiments and special topics-a mathematical model approach. Must be taken in $a, b, c$ sequence. Prerequisite: $252 b$.
501-9 (3,3,3) Real Variables. A basic course in mathematical analysis. (a,b) The real number system; fundamental theorems in limits and continuity; open, closed, compact, and connected sets in Euclidean and metric spaces; the Riemann and the Riemann-Stieltjes integrals and functions of bounded variation; infinite series; uniform continuity; uniform convergence of series and improper integrals; arcs and curves; implicit function theorem; multiple integrals. (c) The general theory of measure and integration from an abstract point of view. Additive classes of sets, Borel sets, measurability, measure and outer measure; integrable functions, convergence theorems; absolute continuity and the RadonNikodym theorem; Fubini's theorem. Must be taken in a,b,c sequence. Prerequisite: 452c.
520-9 (3,3,3) Modern Algebra. Topics from group theory, ring theory, and field theory; including Sylow theorems, solvable groups, nilpotent groups, rings with descending and ascending chain conditions, elementary divisor theorem for R-modulus, Galois theory, and cyclotomy. Must be taken $\mathrm{a}, \mathrm{b}, \mathrm{c}$ sequence. Prerequisite: 419 or consent of instructor.
530-3 to 6 Point Set Topology. Topological spaces; denseness, category; open, closed sets, Borel sets; separation axioms; subspaces; continuity; lattice of topologies; countability axioms; connectedness, compactness, local properties; regularity to complete normality. Hilbert space, metrizable spaces; extension theorems; well-ordering; product spaces. Must be taken in a,b,c sequence. Prerequisite: 433 or 501 b .
550-1 to 10 Seminar. Supervised study and preparation of reports on assigned topics. Reports presented for class discussion. (a) Algebra. (b) Geometry. (c) Analysis. (d) Probability and Statistics. (e) Mathematics Education. (f) Logic and Foundations. (g) Topology. Prerequisite: consent of instructor.
551-9 (3,3,3) Functional Analysis. The theory of linear transformations between infinitely dimensional topological vector spaces, including Banach and Hilbert spaces, with various applications. The basic notion for the study is that of a functional or continuous scalar-valued linear transformation. Must be taken in $\mathrm{a}, \mathrm{b}, \mathrm{c}$ sequencc. Prerequisites: 501 c and 42 lb .
595-1 to 10 Special Project. An individual project, including a written report. (a) in algebra; (b) in geometry; (c) in analysis; (d) in probability and statistics; (e) in mathematics education; (f) in logic and foundations; (g) in topology. Master of Arts degree.

## Music

002-7 (1, 1, 1, 1, 1, 1,1) Choral Ensembles. (a) Collegiate Singers, (b) University Chorus, (c) Male Chorus, (d) Women's Crlee Club, (e) Southern Illinois University Community Choral Society, (f) Madrigal Singers, (g) Concert Choralc. May be taken in any sequence. Any part may be repeated for twelve quarters. Prerequisite: auditions for a,f,g.
465-3 Development and Teaching of Strings. Place and function of string education in the elementary and secondary schools. Techniques of heterogeneous and homogeneous string teaching. Developing and sustaining interest in the string program. Resource aids. May be repeated for a total of 9 hours credit. Prerequisite: senior standing.
502-9 (3,3,3) History and Analysis of Musical Style. Analysis of representative works chosen from the Baroque, Classical, Romantic, and Modern eras.
519a-3 Vocal Pedagogy. (a) Emphasis on techniques and materials to be used with beginning voice students. (b) Advanced vocal pedagogy.

## Personnel and Industrial Relations

450-4 Personmel Administration. The functions of the personnel department in an organization; organization for personnel administration; factors affecting the efficiency of personnel; the managerial responsibility for effective personnel administration; personnel practices including recruitment, selection, employment, orientation. evaluation, transfer, promotion, dismissal, grievances, the personmel-centered approach contrasted to the task-centered approach. Case discussion and reports on selected topics assist in developing the varied responsibilities of the personnel function. Prerequisite: General Business Administration 340.
451-4 Labor Relations Law and Collective Bargaining. An analysis of labor relations legislation and the complex interrelations of management. employees, and labor unions. as well as of collective bargaining contracts, their scope, enforceability, and significance to labor relations. Cases and reports incorporated. Prerequisite: General Business Administration 340. 452-4 Advanced Problems in Personnel Administration. Analysis of special problems of personnel administration in periods of rapid technological change. Case problems and reports are used to emphasize such pertinent areas as wage and salary administration, automation, umemployment, training, productivity, and the administration of technical and scientific personnel. Prerequisite: 450 .

## Philosophy

302-4 World Religions. A historical and comparative study of the principal religions of the world. Particular attention is given to such non-Christian faiths as Hinduism, Buddhism, and Islam.
385-20 (4,4,4,4,4) History of Western Philosophy. (a) Greek and Roman. (b) Medieval and Renaissance. (c) Classical Modern (17th and 18 th centuries). (d) 19 th Century. (e) 20 th Century.
$495-2$ to 12 Independent Readings. Independent study in philosophy on a tutorial basis. Prerequisite: consent of instructor and chairman.

## Physical Education

350-4 Methods and Materials for Teaching Physical Education Activities in the Elementary School. The organization and conduct of the program, program planning, evaluation of materials, observation and practice in creative rhythms, singing games, folk dancing, and games of low organization. (Required for elementary education.)
502-4 Foundations of Motor Skills. Application of physiological, kinesiological, and mechanical principles to intelligent control of large-muscle activities. Recommended background: a course in kinesiology.
503-4 Seminar in Physical Education. The course content and its procedures center around group discussions of controversial issues that currently exist in physical education and provide opportunities for practice in seeking unbiased solutions to professional problems.
$525-2$ to 6 Readings in Physical Education. Supervised reading in selected subjects. Prerequisite: consent of instructor and chairman of department. Open only to last-quarter seniors and graduate students.

## Physics

530-9 (3,3,3) Electromagnetic Theory. Maxwell's Formalism of classical
electromagnetism, application of electrostatics, magnetostatics, electrodynamics and radiation problems. Prerequisite: 305.

## Production

461-4 Methods Design and Work Measurement. Design of work systems, methods, and the techniques employed in the measurement of work. Emphasizes current philosophy underlying improvement of work methods and procedures used to measure work performed. The course covers four major areas: methods design, standardizing the operation, work measurement, and training the operator. A number of projects correlating with the course material are assigned. Prerequisite: 460.

## Psychology

301-4 Child Psychology. A study of the biological and psychological development of the child from birth through puberty, and of relevant research methods and results. Prerequisite: GSB 201c.
305-4 Introduction to Personality Dynamics. Exploration of human motivations, personality patterns, and ways of coping with the stresses of modern life. Prerequisite: GSB 201c.
311-4 Experimental Psychology: Learning. Investigates the processes governing behavioral change. Emphasizes experimental studies of conditioning, memory, and forgetting. Laboratory work includes the design and conduct of experiments with humans and animals. Lecture and laboratory. Prerequisite: 211a,b.
409-4 History and Systems. Study of the important antecedents of contemporary scientific psychology. Considers issues, conceptual developments, and research advances, and presents the major schools and systems. Prerequisite: signed consent of psychology adviser.
440-4 Theories of Personality. A review and critical evaluation of major personality theories and their supporting evidence. Prerequisite: 305 or consent of instructor.
465-4 Group Dynamics and Individual Behavior. Examination of research and theory in the area of small-group interaction. Examines such topics as group structure and function, group problem-solving, leadership, etc. Prerequisite: 320 or consent of instructor.
473-4 Personnel Psychology. Psychological methods in selection, placement, evaluation, and criterion development. Emphasis is on principles and techniques with some examples of application to decision making in business and industry. Prerequisite: 320 or consent of instructor.
490-1 to 4 Independent Projects. Independent readings and projects in psychology. Prerequisite: consent of instructor and chairman.
501-12 (4,4,4) Proseminar in General Psychology. Basic conceptual and methodological problems in the study of behavior. (a) History and systems of psychology, philosophy of science, scientific methodology, behavior theory. (b) Acquisition of behavior, sensory and perceptual processes, motivation and emotion. (c) Personality and individual differences, new conceptual and methodological developments and trends. To be taken in sequence. Prerequisite: consent of instructor. Open to students in other areas by arrangement with chairman.
521-4 Research Design and Inference II. Design and analysis of factorial experiments including analysis of variance models, analysis of covariance, and of Latin square design. Prerequisite: 520.
530-4 Personality Theory and Dynamics. Intensive treatment and critical analysis of several representative approaches to personality. Consideration also of important personality concepts common to most theoretical approaches. Prerequisite: consent of instructor.
541-6 to 8 (4.2 to 4) Psychodiagnostics I. Introduction to clinical psychology with attention to the function and clinical use of individual intelligence tests. Theories of intelligence and related research. Age scales with emphasis on infant and child testing. Point scales and tests of deterioration with emphasis on child and adult testing. Lecture and practicum. Prerequisites: 520 and consent of instructor.
590-1 to 16 Readings in Psychology. Readings in selected topics in psychology under staff supervision. Prerequisite: consent of chairman. 591-1 to 36 Research in Psychology. Research under staff supervision in selected areas of psychology. Prerequisite: consent of the chairman. 593-1 to 18 Practicum in Psychology. Practicum experience in a professional setting is offered under staff supervision in the following areas: (e) Clinical Psychology, (f) Counseling Psychology, (h) Industrial Psychology, (j) Child Psychology, (k) Community Health Psychology,
(1) Teaching of Psychology.

## Quantitative Methods

210-4 Probability in Decision Making. Introduction to certain modern
nathematical concepts and methods applicable to business decisions inluding probability, probability distributions, and elements of calculus. Prerequisite: GSD 114d.
11-4 Statistical Analysis for Business Decisions. A further exploration f statistical concepts as applied to business situations including analysis f variance, multiple regression analysis, and non-parametric statistics, Inder conditions of uncertainty. Prerequisite: 210.
310-4 Operations Research for Managers. An introduction to the body of analytical techniques comprehended by the phrase "operations reearch" with emphasis upon their application to business situations. Infudes an introduction to matrix algebra and its use in linear programning. Prerequisite: 211.
511-4 Quantitative Methods for Decision-Making. Modern mathematical echniques applicable to business problems. Methods include set theory, inite mathematics, and calculus. Restricted to Master of Business Adninistration students.

## Rehabilitation

519-2 Selection, Placement, and Follow-up. A survey of current methods and criteria used in job development, selective placement, and follow-up of handicapped and deprived individuals. Prerequisite: consent of intructor.
331-2 Vocational Appraisal. Consideration of tests and procedures used n assessing the individuat's functioning abilities and the meaning work as in achieving fulfillment, which also includes the requirements of he job for purposes of aligning the two. Prerequisite: 511 or consent of nstructor.
580-1 to 6 Practicum in Rehabilitation Services. Familiarization with he functions of various rehabilitation settings through observation and participation in those activities usually one day per week. Prerequisite: consent of instructor.
585-1 to 16 Practicum in Rehabilitation Counseling. Practice in develping counseling skills under close supervision in a variety of settings. Prerequisites: Guidance 537a and consent of instructor.

## Sociology

372-4 Criminology. The nature of crime; criminal statistics; causal facors: theories and procedures in prevention and treatment. Prerequisite: consent of instructor.

## Vocational-Technical Institute

CCS 103-2 Child and Nutrition. Nutritional needs of the young child. The establishment of good food habits. The individual child and his eeding behavior.
CCS 115-2 Art and Music. Creative arts inaterials suitable for the prechool child and methods of presentation. Appropriate musical instrunents and experiences. Development of projects; their presentation and evaluation in preschool centers.
CCS 203-3 Parent and Community. Through contacts, both individual and group, the student experiences ways of working with the parents of children under seven. Some focus is given to the relationship of community agencies to educational centers and parents. Prerequisites: 101, 109, or consent of adviser.





[^0]:    Recommended Citation
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