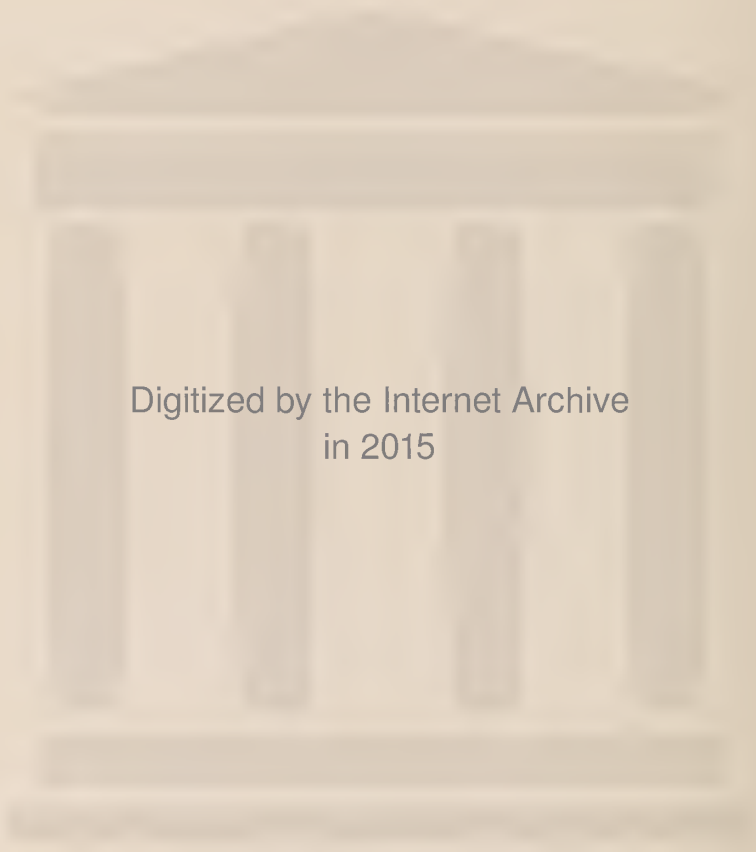


**Bloomsburg  
State  
College  
Graduate  
Bulletin  
1975 - 1976**





Digitized by the Internet Archive  
in 2015

The College welcomes qualified students, faculty and staff from all racial, religious, ethnic and socio-economic backgrounds.  
[https://archive.org/details/bloomsburgstatec00bloo\\_11](https://archive.org/details/bloomsburgstatec00bloo_11)

# ADMINISTRATIVE PERSONNEL

1974-1975

- JAMES H. McCORMICK *President*  
B.S. in Ed., Indiana University of Pennsylvania; M.Ed., Ed.D.,  
University of Pittsburgh. (September 1, 1973).
- CHARLES H. CARLSON *Dean of Graduate Studies*  
B.A., San Jose State College; M.A., Ed.D., Columbia University.  
(1959).
- DAYTON S. PICKETT *Vice President and Dean of Faculties*  
B.S., United States Military Academy; M.S., Iowa State University;  
Ph.D., University of Denver. (1972).

## GRADUATE COUNCIL

1974-1975

- CHARLES H. CARLSON *Dean, School of Graduate Studies*
- DAYTON S. PICKETT *Vice President and Dean of Faculties*
- BRUCE E. ADAMS, Professor *Geography*  
B.S., Lock Haven State College; M.Ed., Ed.D., The Pennsylvania State  
University. (1956).
- EDSON J. DRAKE *Dean, School of Arts and Sciences*  
B.A., University of Notre Dame; M.A., Ph.D., Georgetown Univer-  
sity. (1964).
- C. STUART EDWARDS *Dean, School of Professional Studies*  
B.S., Bloomsburg State College; M.Ed., Ed.D., The Pennsylvania  
State University. (1958).
- DONALD C. MILLER, Associate Professor *Chairman,*  
*Elementary Education*  
B.S., Ohio State University; M.Ed., Bowling Green State University;  
Ph.D., Ohio State University. (1971).
- WILLIAM L. JONES, Professor *Former Director, Division of*  
*Human Resources and Services*  
B. A., M.Ed., Ed.D., University of Nebraska. (1964).
- THOMAS R. MANLEY, Professor *Biological Sciences*  
B. A., Fairmount State College; M.S., West Virginia University. (1961).
- EMORY W. RARIG, JR. *Dean, School of Business*  
B.S., Bloomsburg State College; M.A., Ed.D., Columbia University.  
(1968).
- JAMES R. SPERRY, Professor *History*  
B. A., Bridgewater College; M.A., Ph.D., University of Arizona. (1968).
- THOMAS G. STURGEON, Professor *English*

- A.B., Westminster College; M.A., Ph.D., Harvard University. (1963).
- WILBERT A. TAEBEL, Professor *Chemistry*  
 B.S., Elmhurst College; M.S., Ph.D., University of Illinois. (1966).
- LOUIS F. THOMPSON, Professor *Chairman, English*  
 A.B., Columbia College; M.A., Ph.D., Lehigh University. (1963).
- ROBERT D. WARREN, Professor *History*  
 B.S., Appalachian State Teachers College; M.A., Ph.D., Georgetown  
 University. (1964).
- LYNN A. WATSON, Professor *Elementary Education*  
 B.S., Shippensburg State College; M.Ed., Ed.D., The Pennsylvania  
 State University. (1966).
- RICHARD O. WOLFE, Professor *Dean of Extended Programs*  
 B.S. in Ed., Bloomsburg State College; M.Ed., Rutgers University;  
 Ed.D., University of Pennsylvania. (1967).
- JAMES F. MULLEN, Graduate Assistant *Reading Clinic*  
 B.S., The Pennsylvania State University.
- MARY E. ROBINSON, Graduate Assistant *Special Education*  
 B.S., Lock Haven State College.



# TENTATIVE GRADUATE CALENDAR

## 1975-76 ACADEMIC YEAR

### 1975

September 2 —	Final date of registration for First Semester
September 3 —	Classes begin for First Semester
October 27 —	Final date for submitting application for graduation (including payment of graduation and binding fees)
October 27 —	The time of the final oral examination of the thesis will be set
October 27 —	Final date for completion of Master's Theses, Departmental Papers, and/or Comprehensive Examination
November 26 —	Thanksgiving recess begins at 12:00 noon
December 2 —	Thanksgiving recess ends at 8:00 a.m. Classes resume
December 21 —	Commencement
December 22 —	End of First Semester

### 1976

January 12 —	Final date of registration for Second Semester
January 13 —	Second Semester classes begin
March 4 —	Spring recess begins at close of classes.
March 16 —	Spring Recess ends, 8:00 a.m.
March 26 —	Final date for submitting application for graduation (including payment of graduation and binding fees)
March 26 —	The time of the final oral examination of the thesis will be set at this time
March 26 —	Final date for completion of Master's Theses, Departmental Papers, and/or Comprehensive Examinations
April 15 —	Easter Recess begins at close of classes
April 20 —	Easter Recess ends, 8:00 a.m.
May 15 —	Second Semester ends
May 16 —	Commencement





# 1. GENERAL INFORMATION

## 1.1 PURPOSE

Graduate work at Bloomsburg State College is planned to provide opportunity for study leading to masters' degrees and for non-degree graduate level study.

The latter includes opportunity for teachers to take courses for self-improvement and for certification credit. College graduates other than teachers are invited also to study courses for self-improvement without a degree.

## 1.2 LOCATION

Bloomsburg State College is located within the town of Bloomsburg, a community with a population of approximately 11,000 seventy-five miles northeast of Harrisburg on Route U.S. 11. There is an interchange of Interstate Route 80 two miles from the campus. Bloomsburg is served by the Greyhound and Continental Trailways Bus Lines, with service to eastern cities. The airports at Williamsport and Scranton-Wilkes Barre are within an hour's drive.

## 1.3 ACCREDITATION

Bloomsburg State College is accredited by the National Council for Accreditation of Teacher Education and by the Middle States Association of Colleges and Secondary Schools. Its graduate programs have been approved by the Pennsylvania State Department of Education.

## 1.4 LIBRARY

Andruss Library, named in honor of Dr. Harvey A. Andruss, President of the College from 1939 to 1969, was completed in August, 1966. It is located between Hartline Center for the Sciences and Bakeless Center for the Humanities. The building has accommodations for 600 to 800 readers, shelving for 200,000 volumes, a projection room, a Learning Resources Center and areas housing a special Juvenile Collection, a Documents Collection, and a Microforms Collection. The building is air-conditioned.

The library provides books and other materials supporting courses, research, and personal enrichment for students and faculty. Included in the overall collection are 165,000 fully-accessioned volumes, of which 10,000 comprise a Juvenile Collection and 4,000 are bound periodicals; more than 100,000 units of microforms; and files of pamphlets and mounted pictures. More than 2,000 periodicals and 90 newspapers are received on a regular basis. The Learning Resources Center includes films, filmstrips, recordings, slides, transparencies, and other multi-media materials.

## 1.5 LIVING ACCOMMODATIONS

Residence halls are open to graduate students during summer terms. Requests for information concerning residence hall accommodations may be secured from the Dean of Student Life. Meals are available to graduate students in Scranton Commons.

## 1.6 FEES AND REFUNDS

*(Fees are subject to change without notice)*

Application Fee (payable upon application for admission to grad. courses)	\$10
Basic Fee:	
Residents of Pennsylvania—per semester hour	\$43
Out-of-state Students—per semester hour	\$80
Late Registration Fee	\$10
Activities Fee	
Summer Term—Six weeks session	\$6
—Three weeks session	\$3
Graduation and Diploma Fee (Does not include rental of academic costume)	\$10

*Application Fees are not subject to refund.*

*If a student withdraws from a course for approved reasons before one-third of the scheduled class periods have been completed, he is entitled to a refund of one-half of the basic fee. There is no refund after this point.*

## 1.7 FINANCIAL ASSISTANCE

Normally, only full-time students are eligible to apply for financial assistance. Assistance is available to graduate students in the form of Graduate Assistantships, Federal Fellowships in selected areas, National Defense Student Loan Programs, and the Pennsylvania Higher Education Assistance Agency Loan Programs. Inquiries should be addressed to the Director of Financial Aid or the Dean of Graduate Studies.

## 1.8 PLACEMENT

Graduate Students are eligible to use the services of the Placement Office after they have been accepted as candidates for a Master's degree.



## 2. ACADEMIC POLICIES

### 2.01 STUDENT RESPONSIBILITY

It is the student's responsibility to satisfy the requirements for graduation in his curriculum and to observe the academic regulations of the Graduate School. Although the adviser and the staff of the Graduate School stand ready to aid the student in his decision making, the final responsibility rests with the student.

### 2.02 DEGREES

The Master of Education degree was established in 1960. Its programs are planned for teachers in service.

The first Master of Arts program (history) was established in 1968 and the first Master of Science program (biology) in 1971.

The purpose of programs for the professional degree, Master of Education, is to enhance the competence of teachers. The purpose of a Master of Arts program is to advance the student's scholarship in an academic discipline, and that of a Master of Science program is to develop mature scholarship and competence related primarily to application.

### 2.03 TIME LIMIT

All requirements for a master's degree, including any courses accepted by transfer, must be completed within six calendar years. This period may be extended by the Graduate Council for sufficient reason. Written application for extension must be made to the Dean of Graduate Studies prior to the end of the six-year period.

### 2.04 SCHEDULE OF CLASSES

Graduate classes taught in the regular academic year are usually scheduled in late afternoons, evenings and Saturdays in order to provide opportunity for teachers and individuals engaged in other full-time occupations to further their education. Graduate Courses are offered in the summer terms in regular daytime classes.

### 2.05 ADMISSION TO GRADUATE COURSES

Admission to graduate courses is granted upon: the filing of a formal application, submitting of credentials showing a baccalaureate degree from an accredited college with a quality point average of 2.0 or higher (A = 4), and payment of non-refundable application fee of \$10.00.

Admission to graduate courses does not admit the student to candidacy for a master's degree.

## 2.06 CATEGORIES OF GRADUATE STUDENTS

Each graduate student belongs to one of five categories as follows:

### *CATEGORY I (NON-DEGREE)*

Category I comprises students who do not intend to become candidates for a master's degree, or who in their application expressed a desire to take a degree in a field in which a program is not offered, or who have been transferred to this category from other categories as stipulated below.

Students in Category I may apply for transfer to Category III or Category IV. A cumulative average of 3.0 is prerequisite to transfer. Not more than twelve semester hours taken while in Category I may be applied to a master's degree unless a special dispensation is granted by the Graduate Council.

A student may if he wishes remain indefinitely in Category I (for example—students interested only in certification credit).

### *CATEGORY II*

This category comprises graduate students who indicated an intention to take a master's degree in an existing program but whose undergraduate record showed a quality point average lower than 2.25. If a student in this category makes an average of 3.0 in his first six to nine semester hours of graduate study at Bloomsburg, he is eligible for transfer to Categories III or IV; otherwise, he is automatically transferred to Category I after nine semester hours have been completed.

### *CATEGORY III*

Category III comprises individuals other than those in Category II who have applied for admission to existing master's degree programs. Transfer to Category IV is automatic when the adviser certifies to the Graduate Dean that there are no undergraduate deficiencies to be made up or when previously identified deficiencies have been successfully made up.

### *CATEGORY IV*

This category comprises graduate students who have been cleared of undergraduate deficiencies for the master's degree program for which they have applied. A student must be in Category IV to be eligible to apply for admission to candidacy for a master's degree program. A student in Category IV is transferred automatically to Category I if he has not attained admission to candidacy by the time twelve semester hours of graduate work have been completed.

### *CATEGORY V*

This category comprises students who have been admitted to candidacy for a Master's degree. An individual in Category V is automatically transferred to Category I if his cumulative quality point average falls below 3.0 or if he has not completed his degree within the six-year time limit. A student thus transferred has the right to petition the Graduate Council for restoration to Category V.

## **2.07 ADVISEMENT OF GRADUATE STUDENTS**

Graduate students in Categories II, III, IV and V are assigned to advisers. The duties of the adviser of a graduate student are: to serve as consultant in the planning of the student's program and in his choice of courses; to certify approval of the courses as part of the student's degree program; to endorse the student's application for degree candidacy; to arrange for a comprehensive examination if it is required by the program.

The adviser is appointed by the Dean of Graduate Studies upon recommendation of the department of the proposed specialization.

An interview with the adviser is required prior to first registration for graduate courses and prior to each subsequent registration.

Students in Category I are not assigned to advisers. They submit their registration materials directly to the office of the Dean of Graduate Studies. They may regard the Dean of Graduate Studies as an adviser in case assistance is needed in choosing courses or in interpreting academic regulations.

## **2.08 CREDIT**

Credit is measured in semester hours at the rate of one semester hour for fifteen hours of lecture-discussion work plus final examination.

## **2.09 SEMESTER HOUR LOAD**

During a period in which he is engaged in full-time employment, an individual may enroll in a maximum of six semester hours in a given semester. Overloads are permitted only upon approval by the Dean of Graduate Studies. Approval is given only in the most unusual circumstances.

The normal load for a full-time student in a semester is twelve semester hours. An overload to a maximum of fifteen semester hours requires the permission of the Dean of Graduate Studies.

In terms other than regular semesters, the maximum is determined at the rate of one semester hour per week of full-time course work.

The normal load of a graduate assistant on full stipend is six to nine semester hours; that of a graduate assistant on half stipend is nine to twelve semester hours. No overload is permitted.

## **2.10 NUMBERING OF COURSES**

Courses numbered 500 or higher are open only to graduate students. Courses numbered below 500 and listed in this bulletin are open also to advanced undergraduates. The number of credits in such courses which may be applied to a degree is limited to twelve semester hours. It is understood that graduate students enrolled in these courses will exhibit work of graduate calibre in their independent study and their papers.

## **2.11 TRANSFER OF CREDIT**

A maximum of six semester hours in graduate courses taken in other approved colleges may be credited toward a master's degree. The transferred courses must have been taken in residence; they must cover content which is required in the student's program or recommended by the adviser for elective credit; they must have grades of B or higher. In case a course has been taken on a branch campus of a university, it will be construed as a residence course if full-time graduate students are accommodated to take a degree program on that campus.

## **2.12 REGISTRATION FOR GRADUATE COURSES**

Students register for graduate courses through the office of the Dean of Graduate Studies.

## **2.13 ATTENDANCE AT CLASSES**

A student who is absent from a graduate class for a reason which can be verified as urgent is entitled to a reasonable amount of assistance from the professor in making up the work which was missed. This includes permission to make up an examination given the class during his absence and the late submitting of assignments that were due during the period of absence. It is the student's responsibility to provide the verification if requested when applying for the privilege of making up the work missed.

## **2.14 WITHDRAWAL**

A graduate student may withdraw from a course by applying to the Dean of Graduate Studies. If withdrawal is requested prior to the date established by the registrar as the midpoint of the semester, the grade in the course is W. If withdrawal is initiated later, the grade is W if the student is currently passing the course; otherwise the grade is E.

The official date of withdrawal used in computing a grade and in determining a refund is the date of the latest class meeting prior to the filing of the withdrawal request in the office of the Dean of Graduate Studies.

## **2.15 EXAMINATIONS**

The Miller Analogies Test is required of each student before he may be admitted to candidacy for a Master's degree. The time and place of the examination may be learned upon inquiry to the Dean of Graduate Studies.

A comprehensive examination in the specialization may be set by the department as a degree requirement.

An examination in defense of a Master's Thesis is usually required of students who choose to write a thesis.

## **2.16 MASTER'S THESIS**

If a master's thesis is included in the student's program, a committee is appointed by the Dean of Graduate Studies from individuals nominated

by the student's adviser. The committee is responsible for guiding the study, certifying approval of the written report both in form and content, arranging for the defense, certifying satisfactory completion of the thesis and determining the grade.

Three bound copies of the thesis must be filed with the Dean of Graduate Studies.

The student is responsible for following all of the thesis procedures specified in a special bulletin which may be obtained in the Graduate Office.

Where the requirements for a concentration for the Master of Education degree include a departmental paper, such a paper is interpreted as one which grows out of a course and therefore does not require special registration nor carry its own credit. Completion of a departmental paper must be certified by the adviser as a part of the application for graduation.

## **2.17 GRADUATE COURSES IN THE SENIOR YEAR**

A senior who is registering for the semester (or summer term) in which he will complete the requirements for a baccalaureate degree and who requires less than fifteen semester hours (six semester hours in case of six week summer term or twelve semester hours in case of two consecutive six week summer terms) may supplement the requisite undergraduate courses with graduate courses provided the total of undergraduate and graduate courses does not exceed the normal loads as stated herein.

The recommendation of the student's undergraduate adviser, including his certification that the undergraduate courses listed will complete the baccalaureate requirements, must accompany the application for admission to graduate courses. The student must pay the graduate application fee.

The graduate credit earned in this term is held in reserve until the baccalaureate has been completed.

## **2.18 GRADUATE ASSISTANTSHIPS**

A limited number of graduate assistantships are available for full-time students in the regular academic year. Application is made to the department in which the service would be performed.

The maximum amount which may be earned by a graduate assistant in one year is \$2,705. Appointments are made either for this maximum sum or one-half of this sum. The graduate assistant on full stipend is responsible for 10 to 20 hours per week of service. The graduate assistant on half stipend is responsible for 5 to 10 hours per week of service.

## **2.19 GRADES AND AVERAGES**

Grades given for graduate courses are:

- A — Distinguished; scholarly work which exhibits independence and intellectual maturity. (4 quality points)
- B — Good. (3 quality points)
- C — Fair; acceptable toward a master's degree program within limits. (2 quality points)



- D — Not acceptable in a degree program. (1 quality point)
- E — Failing. (0 quality points)
- I — Incomplete: work must be completed within four months unless the period is extended by the Dean of Graduate Studies for adequate reason. If the work is not made up, the grade is changed to N and the student is denied further opportunity to complete the work.
- R — Research in Progress.
- W — Withdrawn with approval of the Dean. The regulations governing the grade of W are described in the paragraph on withdrawal.
- N — No grade; no credit.

The Cumulative Quality Point Average (QPA) is computed by the following process: (1) Multiply the number of quality points for each grade of A, B, C, D, or E in a graduate course taken at the College by the number of semester hours for the courses; (2) add these products; (3) divide by the sum of the semester hours for all grades which entered the computation. When a course has been repeated, only the last entry is used.

## 2.20 REPEATING COURSES

No course may be repeated more than once. (See Section 2.19 for effect on the quality point average.)

## 2.21 ACADEMIC STANDARDS

Each program that leads to a Master's degree requires a minimum of thirty semester hours of graduate credit. Credit for courses with grades below C is not accepted toward the requirements for the degree.

The student's Cumulative Quality Point Average for graduation must be 3.0 or higher.

## 2.22 THE MASTER OF EDUCATION DEGREE

### Admission to Candidacy

A student in Category IV may apply for admission to candidacy for the Master of Education degree by fulfilling the following conditions:

- (1) He/she must file with the Dean of Graduate Studies an application for admission to candidacy properly recommended by his/her adviser.
- (2) Transcripts of all undergraduate and previous graduate study must be on file in the Office of the Dean of Graduate Studies.
- (3) The Miller Analogies Test must have been taken.
- (4) He/she must submit a proposed program for the completion of the requirements for his/her degree. The program must bear the recommendation of his/her adviser.
- (5) He/she must submit evidence of possession of a valid teaching certificate.

Action on the application for admission to candidacy is taken after the student has completed at least nine semester hours of graduate courses with a cumulative quality point average of 3.0 or higher.

Admission to candidacy must be secured no later than the completion of twelve semester hours of courses proposed as part of the degree program.

Upon approval of the application for admission to candidacy the student is transferred to Category V. A student who fails to attain admission to candidacy by the time twelve semester hours of credit have been earned is transferred to Category I. For adequate reason (for example, the existence of undergraduate deficiencies so extensive that more time is needed) this limit may be extended by the Graduate Dean.

Admission to candidacy is regarded as an expression of confidence that the student can complete the requirements of the master's degree successfully and can fulfill the purposes of the degree.

### Program of Courses for the Degree Master of Education

Two basic courses in professional education are required as follows:

**60.501 Major Philosophies of Education . . . . . 3 sem. hrs.**

**60.591 Foundations of Educational Research . . . . . 3 sem. hrs.**

The candidate may elect to take one additional basic education course to be chosen with the approval of his/her adviser from the following:

**60.511 Recent Trends in Curriculum Development . . . . . 3 sem. hrs.**

**60.515 Education of Gifted Children . . . . . 3 sem. hrs.**

**60.550 Problems in Guidance and Counseling . . . . . 3 sem. hrs.**

**60.561 Measurement and Evaluation in the  
Secondary School . . . . . 3 sem. hrs.**

**48.511 Psychology of Childhood and Adolescence . . . . . 3 sem. hrs.**

**48.576 Theories of Human Learning . . . . . 3 sem. hrs.**

In addition to the above basic courses in education the candidate must complete a specialization of twenty-four or twenty-one semester hours so as to make the total credit at least thirty semester hours.

The Areas for Specialization are:

Biology	History
Business Education	Physical Science
Chemistry	Physics
Communication Disorders	Political Science
Comprehensive Social Studies	Reading
Elementary Education	Spanish
English	Special Education
French	Speech
Geography	

The requirements for each area of specialization are stated in the appropriate section of the chapter on course descriptions.

NOTE: Policies and programs may be revised during the academic year. It is the responsibility of the student to contact the Office of Graduate Studies to insure that the statements and procedures included in this Bulletin are currently applicable.

## 2.23 THE MASTER OF ARTS DEGREE

### Admission to Candidacy

A student in Category IV may apply for admission to candidacy for the Master of Arts degree by fulfilling the following conditions:

(1) He/she must file with the Dean of Graduate Studies an application for admission to candidacy prior to his/her completion of twelve semester hours of graduate courses. The application must be endorsed by his/her adviser.

(2) Transcripts of all undergraduate and previous graduate study must have been transmitted to the Dean of Graduate Studies by the institutions in which the work was taken.

(3) He/she must have attained a satisfactory score on the graduate qualifying examination.

(4) Undergraduate deficiencies if any must have been satisfactorily made up.

Action on the application is taken after the student has completed at least nine semester hours of graduate courses which he/she proposes to submit as part of his program, with grades that average B or higher. Admission must be secured no later than completion of twelve semester hours of the proposed program.

Admission to candidacy is regarded as an expression of confidence that the student can complete the requirements successfully and can fulfill the purposes of the degree.

### Program of Courses for the Degree, Master of Arts

The course requirements for this degree comprise a minimum of thirty semester hours in courses in the discipline of the major and in such closely related concomitant disciplines as contribute to the understanding of the major. Courses must be approved by the adviser and the department chairman.

A thesis is required.

Currently the degree Master of Arts is offered in English, History and Political Science. The requirements for the major are found in the corresponding sections of the course descriptions. Additional programs for the degree, Master of Arts, are in preparation.

## **2.24 THE MASTER OF SCIENCE DEGREE**

### **Admission to Candidacy**

The requirements and procedures are the same as for admission to candidacy for the Master of Arts degree.

### **Program of Courses**

The course requirements for the Master of Science degree comprise a minimum of thirty semester hours. Because the purpose of a program for this degree is more specific than for the Master of Arts degree, more of the work may be prescribed and less elective. All courses must be in the discipline of the major or in concomitant disciplines which contribute significantly to the purpose of the program. Elective courses must be approved by the adviser. Approval implies their significance to the purpose of the program.

A thesis is required.

Currently the Master of Science degree is offered only in Biology. The requirements are stated in the Biology section in the chapter on course descriptions.

## **2.25 MASTER'S DEGREE EQUIVALENCE CERTIFICATE**

The Commonwealth makes available a Master's Degree Equivalence Certificate, upon the evidence that the applicant has completed thirty-six semester hours of graduate study including a minimum of twelve semester hours in the major field.

The college welcomes teachers who wish to use its resources to support an application for this certificate. No formal program is constructed for this purpose, and no responsibility is assumed by the college, but students are welcome to consult the Dean of Graduate Studies when selecting courses. Students who wish to take courses for this purpose are classified in Category I.

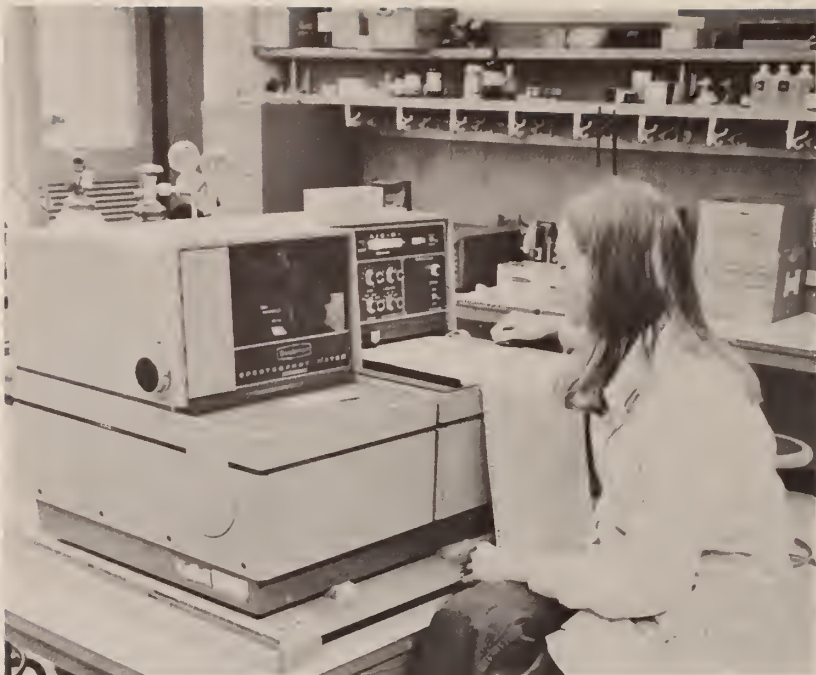
## **2.26 GRADUATION**

It is the responsibility of the student to apply for graduation prior to the final date stated in the official calendar. A blank for application for graduation may be secured at the Graduate Office.

Attention is called, also, to the final dates for completion of thesis and department papers, comprehensive examinations, defense of thesis and payment of graduation fees and fees for binding as these dates are listed in the graduate calendar.

The dates provide time to compile graduation lists, diploma orders and academic costumes, and to complete other necessary details.

A student who files his application after the specified date will be included in the first subsequent commencement; however, he/she is eligible upon completion of his/her work to receive a letter certifying that all requirements for the degree have been completed and stating the date upon which the degree is to be conferred.





# 3. SCHOOL OF ARTS AND SCIENCES

## 3.1 HUMANITIES

### FOREIGN LANGUAGES

Specialization in French or Spanish for the Master of Education Degree.

**Purpose:** These specializations are designed to meet the needs of pre-service and in-service teachers in secondary and elementary schools, enhance their competency and foster their growth in the profession.

**Prerequisite:** An undergraduate major or its equivalent in the language. Deficiencies must be made up in addition to the credit required for the Master of Education Degree.

**Requirements:** A minimum of eight courses (twenty-four semester hours):

- Any three language courses from 500 through 506;
- One civilization course: 510 or 511 (515 for French);
- Three literature courses selected from 520 and above;
- Electives: Any course of literature, language or civilization.

(The general requirements for the degree are stated in Section 2.22.)

**Examinations:** Prior to admission to candidacy for the master's degree the student will be tested on his facility in speaking, listening, reading, and writing in the language. It is recommended that he/she have taken, prior to the test, the required courses in language and/or one in literature.

A comprehensive written and oral examination covering a reading list established by the Department is a graduation requirement. A portion of the written examination is devoted to language. Part of the oral examination is conducted in the target language.

### FRENCH

(Code 10)

**10.500 (514) SYNTAX ..... 3 sem. hrs.**

Systematic review of advanced French grammar.

**10.501 LINGUISTICS ..... 3 sem. hrs.**

An introduction to the study of language as a science. A history of the French language. The application of the science of linguistics to the teaching of French.

**10.502 (514) STYLE AND STYLISTICS ..... 3 sem. hrs.**

Acquisition of accuracy in written compositions and intensive analysis of selected modern prose work.

- 10.503 (513) ADVANCED FRENCH PHONETICS ..... 3 sem. hrs.**  
 Study of the sounds of French through the application of the international phonetic alphabet. Laboratory drills and recordings.
- 10.504 ORAL EXPRESSION ..... 3 sem. hrs.**  
 Acquisitions of fluency in speech based on contemporary usage. Oral reports, guided discussions and explication de textes.
- 10.505 ADVANCED STRUCTURE AND TRANSLATION ... 3 sem. hrs.**  
 Contrastive analysis of French and English patterns; problems of translation; practice in French-English, and English-French translation.
- 10.506 FRENCH LANGUAGE WORKSHOP ..... 3 sem. hrs.**  
 Discussion of methodology and techniques. Preparation of pattern drills and oral tests. The function of laboratories. Analysis of current textbooks.
- 10.510 CONTEMPORARY FRENCH CIVILIZATION ..... 3 sem. hrs.**  
 Life, institutions, and culture of contemporary France. Readings in current newspapers and magazines. France's contributions to Western civilization.
- 10.515 CULTURE AND CIVILIZATION THROUGH HISTORY ..... 3 sem. hrs.**  
 Study of historical biographies of men and women who shaped France through the centuries.
- 10.520 HISTORY OF IDEAS AND LITERARY CURRENTS ..... 3 sem. hrs.**  
 Study of major philosophic and literary movements, and impact upon literature and culture of France.
- 10.530 (539) TECHNIQUES IN LITERARY CRITICISM ... 3 sem. hrs.**  
 Use of bibliographical aids in research. Acquaintance with the various critical approaches to the study and appreciation of literature.
- 10.540 SEMINAR IN MEDIEVAL AND RENAISSANCE LITERATURE ..... 3 sem. hrs.**  
 Exploration of particular authors, certain genres, or special topics.
- 10.550 SEMINAR IN 17TH AND 18TH CENTURY LITERATURE ..... 3 sem. hrs.**  
 Exploration of particular authors, certain genres, or special topics.
- 10.560 SEMINAR IN 19TH AND 20TH CENTURY LITERATURE ..... 3 sem. hrs.**  
 Exploration of particular authors, certain genres, or special topics.

**10.570 (560) RESEARCH PROJECT ..... 3 sem. hrs.**

Selection of a topic in French language, literature, civilization, or education designed to increase the student's knowledge in the field and develop use of research techniques. Must be written in French.

**10.597 STUDIES ABROAD ..... 3-6 sem. hrs.**

College-organized programs abroad.

**10.598 SPECIAL PROBLEMS ..... 3 sem. hrs.**

Areas of French language or literature allowing the student to cover a particular aspect under special circumstances. May be used as remedial course in case of undergraduate deficiencies, in which case it will not count toward a degree. May be repeated.

**GERMAN**

(Code 11)

Note: Specialization in German for the M.Ed. degree is suspended temporarily.

**11.500 (511) HISTORY OF THE GERMAN LANGUAGE ..... 3 sem. hrs.**

An introduction to the development of the German language from its beginnings to the present day.

**11.501 ADVANCED GERMAN LANGUAGE ..... 3 sem. hrs.**

Advanced grammar, syntax, and composition.

**11.502 (514) STYLE AND STYLISTICS ..... 3 sem. hrs.**

Modern prose selections illustrating contemporary German usage.

**11.505 ADVANCED TEXTS IN "NACHERZAHLEN" AND TRANSLATION ..... 3 sem. hrs.**

Texts given for oral and written mastery; translation exercises from English into German.

**11.506 GERMAN LANGUAGE WORKSHOP ..... 3 sem. hrs.**

Review of present-day methods and materials for teaching.

**11.510 CONTEMPORARY GERMANY ..... 3 sem. hrs.**

The economic, political, social, and cultural aspects of East and West Germany since World War II.

**11.511 GERMAN CULTURE ..... 3 sem. hrs.**

A historical and cultural presentation of the contributions of the German-speaking world.

**11.525 CONTEMPORARY GERMAN LITERATURE ..... 3 sem. hrs.**

German literature since World War II.

**11.526 MODERN GERMAN LITERATURE ..... 3 sem. hrs.**

German literature from the latter part of the 19th century to World War II.

**11.535 (521-522) GOETHE AND SCHILLER ..... 3 sem. hrs.**

The cultural, literary, and aesthetic contributions of Goethe and Schiller to modern German.

**11.536 THE ROMANTIC MOVEMENT ..... 3 sem. hrs.**

The early Romantic poets and their works. Das Marchen and Das Marchenhafte in German literature.

**11.570 (560) RESEARCH PROJECT ..... 3 sem. hrs.**

A topic, to be written in German, on a cultural or literary theme.

**11.597 STUDIES ABROAD ..... 3-6 sem. hrs.**

College-organized programs abroad.

**11.598 SPECIAL PROBLEMS ..... 3 sem. hrs.**

Areas of German language or literature allowing the student to cover a particular aspect under special circumstances. May be used as remedial course in case of undergraduate deficiency, in which case it does not count towards a degree. May be repeated.



## SPANISH

(Code 12)

### **12.502 ADVANCED STUDY OF SPANISH STYLISTICS ..... 3 sem. hrs.**

Study of Spanish grammar stressing creative written expression in the language.

### **12.503 ADVANCED SPANISH PHONETICS ..... 3 sem. hrs.**

Study of the sounds of Spanish with some remarks on regional differences. Designed to develop mastery of correct pronunciation and intonation of Spanish. Laboratory drills and recordings.

### **12.504 (501) ORAL EXPRESSION ..... 3 sem. hrs.**

Acquisition of fluency in speech, based on contemporary usage. Oral reports and guided discussions.

### **12.505 ADVANCED STRUCTURE AND TRANSLATION .... 3 sem. hrs.**

Contrastive analysis of Spanish and English patterns. Spanish syntax. Problems of translation. Practice in Spanish-English and English-Spanish translation.

### **12.506 (551) SPANISH LANGUAGE WORKSHOP ..... 3 sem. hrs.**

Discussion of methodology and techniques. Preparation of pattern drills and oral tests. The functions of laboratories. Analysis of current textbooks.

### **12.510 PENINSULAR CIVILIZATION ..... 3 sem. hrs.**

Panoramic view of Peninsular civilization through discussion, realia, and selected texts. Outside readings in Spanish.

### **12.511 SPANISH AMERICAN CIVILIZATION ..... 3 sem. hrs.**

Panoramic view of Spanish American civilization through discussion, realia, and selected texts. Outside readings in Spanish.

### **12.530 (533) CERVANTES ..... 3 sem. hrs.**

Study and analysis of the life and works of Cervantes. Emphasis on the *Quijote*.

### **12.534 (541) GENERATION OF 98 ..... 3 sem. hrs.**

Study and analysis of the major writers of the period such as Azorin, Unamuno, and Baroja.

### **12.535 SEMINAR IN MEDIEVAL PENINSULAR LITERATURE ..... 3 sem. hrs.**

Exploration of a particular author, genre, or special topic.



- 12.536 SEMINAR IN 16TH AND 17TH CENTURY  
PENINSULAR LITERATURE ..... 3 sem. hrs.**  
Exploration of a particular author, genre, or special topic.
- 12.537 SEMINAR IN 18TH AND 19TH CENTURY  
PENINSULAR LITERATURE ..... 3 sem. hrs.**  
Exploration of a particular author, genre, or special topic.
- 12.538 SEMINAR IN 20TH CENTURY  
PENINSULAR LITERATURE ..... 3 sem. hrs.**  
Exploration of a particular author, genre, or special topic.
- 12.540 (542) MODERNISM ..... 3 sem. hrs.**  
Study and analysis of the Modernist movement in poetry and prose, with particular emphasis on Ruben Dario.
- 12.544 LITERATURE OF THE MEXICAN REVOLUTION... 3 sem. hrs.**  
Study and analysis of literary works of the Mexican Revolution, including such writers as Azuela, Guzman, and Lopez y Fuentes.
- 12.547 SEMINAR IN PRE-19TH CENTURY  
SPANISH AMERICAN LITERATURE ..... 3 sem. hrs.**  
Exploration of a particular author, genre, or special topic.
- 12.548 SEMINAR IN 19TH CENTURY  
SPANISH AMERICAN LITERATURE ..... 3 sem. hrs.**  
Exploration of a particular author, genre, or special topic.
- 12.549 SEMINAR IN 20TH CENTURY  
SPANISH AMERICAN LITERATURE ..... 3 sem. hrs.**  
Exploration of a particular author, genre, or special topic.
- 12.570 (560) RESEARCH PROJECT ..... 3 sem. hrs.**  
Selection of a topic in Spanish language, literature, or civilization designed to increase the student's knowledge in the field and develop use of research techniques. Must be written in Spanish.
- 12.597 STUDIES ABROAD ..... 3-6 sem hrs.**  
College-organized programs abroad.
- 12.598 SPECIAL PROBLEMS ..... 3 sem. hrs.**  
Areas of Spanish language or literature allowing the student to cover a particular aspect under special circumstances. May be used as remedial course in case of undergraduate deficiencies, in which case it will not be counted toward a degree. May be repeated.

# ENGLISH

(Code 20)

## Major in English for the Master of Arts Degree

**Prerequisites:** Thirty semester hours in undergraduate courses in English in addition to freshman composition; preferably including Shakespeare, American and British Literature and History or Grammar of the English Language. Programs will be adjusted for students with undergraduate deficiencies; the adjustments may require undergraduate courses taken in addition to the Master's degree requirements.

**Requirements for the Degree:** A minimum of thirty semester hours including the following:

20.493 (unless completed in undergraduate work);

20.501 or 502 unless completed in undergraduate work;

two courses in British Literature, including Shakespeare or Chaucer unless completed in undergraduate work;

one course in American Literature;

20.531;

20.500;

Electives in graduate courses in English to make the total for the degree at least thirty semester hours.

**Foreign Languages:** Reading proficiency in at least one language other than English, preferably at the level of second-year college study.

**Examinations:** (1) Oral defense of thesis. (2) A written examination on three fields in English determined by a committee of the English Department in consultation with the student.

## Specialization in English for the Master of Education Degree

**Purpose:** This specialization is intended to enhance the scholarship and appreciation of the secondary school teacher of English as a contribution to greater effectiveness of the teacher.

**Required:** 20.500 or 20.531; 20.493.

**Elective:** Courses selected from the courses in English (Category 20) in this bulletin. (The general requirements for the degree are stated in Section 2.22.)

### 20.482 MILTON ..... 3 sem. hrs.

A comprehensive study of the poetry and prose of John Milton. Special reference to the chronology of the works and to evidences of the expanding genius of the author.

### 20.492 LITERARY CRITICISM ..... 3 sem. hrs.

An examination in depth of major critics from Aristotle to the present with emphasis on application of critical principles to primary genres—drama, novel, poetry—and on independent study in varied areas of literature and aesthetics.

**20.493 (503) BIBLIOGRAPHY AND LITERARY RESEARCH ..... 3 sem. hrs.**

History of literary scholarship, study of book production, and practice in preparing specialized bibliographies and in planning scholarly projects.

**20.500 MASTER'S RESEARCH PAPER ..... 6 sem. hrs.**

An extensive and creditable scholarly paper on a topic to be determined by the student in conjunction with his adviser.

**20.501 STRUCTURE OF ENGLISH ..... 3 sem. hrs.**

Phonology, morphology, structural syntax, and graphemics of modern American English.

**20.502 HISTORY OF THE ENGLISH LANGUAGE ..... 3 sem. hrs.**

Phonological, morphological, syntactic, graphemic and vocabulary changes in the English language from the Old English period to the present.

**20.503 APPLIED ENGLISH LINGUISTICS ..... 3 sem. hrs.**

Experimental, project-oriented course in application of modern linguistic theory to classroom situations.

*Prerequisite: 20.501, or comparable graduate or undergraduate course in structural linguistics.*

**20.509 JOURNALISM FOR HIGH SCHOOL TEACHERS ..... 3 sem. hrs.**

For high school teachers who offer courses in journalism or advise the school newspaper; staff recruiting, organization; gathering, writing, editing news; writing other journalistic forms; libel, censorship, freedom of press; business. Lectures, workshops, field trips. Applicable toward M.Ed., but not M.A., in English.

**20.521 CONTEMPORARY SHORT STORY ..... 3 sem. hrs.**

Main lines of development of the short story from the mid-nineteenth century to the present. Attention is given to individual writers, especially major figures; to analysis and evaluation of individual stories; and to the characteristics of the genre.

**20.522 MODERN DRAMA ..... 3 sem. hrs.**

Main forces and movements in modern drama through selected dramatics from the time of Ibsen.

**20.524 CONTEMPORARY NOVEL ..... 3 sem. hrs.**

Writers and the trends of the novel in the modern era, with emphasis on British and American works.

**20.526 MODERN POETRY ..... 3 sem. hrs.**

Reading of a comprehensive selection of modern poetry, British and American. Emphasis on appreciating the art of the poems, on recognizing the modern spirit in them, and on viewing them as part of a historical development of poetic tradition.

**20.528 LITERATURE FOR THE ADOLESCENT ..... 3 sem. hrs.**

Reading, study of books for the adolescent: consideration of literary qualities, evaluation criteria, human values in literature, approaches to literature; book selection, censorship, students' right-to-read. Applicable toward M.Ed., but not M.A., in English.

**20.531 SEMINAR ..... 3 sem. hrs.**

For advanced students near graduation. Each student in Seminar will pursue his own line of study under the guidance of the instructor and in an area of study determined by the student and his adviser. Notice of intention to register for Seminar must be given the instructor of the course at least two months before the course begins.

**20.532 MAJOR BRITISH AUTHORS ..... 3 sem. hrs.**

Study of one or more major writers in English literature. Authors included vary with each presentation of the course.

**20.533, 534, 535 STUDIES IN BRITISH LITERATURE ..... 3 sem. hrs.**

Specialized areas of British Literature such as literary forms, ideas, and movements. Content varies each time the course is offered.

**20.542 EARLY ENGLISH DRAMA ..... 3 sem. hrs.**

The growth of a native drama from the middle ages to the closing of the theatres in 1642, including mysteries, moralities, and interludes. Emphasis is on Shakespeare's contemporaries: Kyd, Greene, Marlowe, and Jonson.

**20.543 CHAUCER ..... 3 sem. hrs.**

Major works with emphasis on the mind and art of Chaucer and considerable attention to the Middle English language. Medieval background and various specialized scholarly problems are also dealt with.

**20.547 ELIZABETHAN POETRY ..... 3 sem. hrs.**

Elizabethan poetry, particularly the sonnet, lyric, and narrative of the 1590's, is examined for structure, origins, and influence. Students are encouraged to develop topics on the works of individual poets.

**20.548 SPENSER ..... 3 sem. hrs.**

A study, generally in chronological order, of most of Spenser's poetry and some of his prose work. Emphasis is on the fusion of Renaissance and Reformation currents in his thought and art, his poetic resourcefulness, and his influence on later English poetry.

**20.549 SHAKESPEARE ..... 3 sem. hrs.**

A few selected plays are closely read. From this study are developed topics in biography and dating, textual history, sources, and contemporary and earlier intellectual influences.

**20.556 RESTORATION AND LATER DRAMA ..... 3 sem. hrs.**

Trends in comedy and tragedy from the reopening of the theatres in 1660 through the 1770's. Among the dramatists studied are Congreve, Dryden, Wycherley, Steele, Goldsmith, and Sheridan. French influences.

**20.559 AGE OF JOHNSON ..... 3 sem. hrs.**

Depth study of such major figures of the Augustan era as Swift, Fielding, Sterne, Addison, Goldsmith, Pope, Johnson, Burns, and Blake. Independent research is based chiefly on studies of minor authors of the period.

**20.563 19TH CENTURY NOVEL ..... 3 sem. hrs.**

Development of the novel as a major literary form of the Victorian age. A study of the work of such major English novelists as Austen, Scott, the Brontes, Dickens, Thackeray, Trollope, and Eliot. Supplementary readings in other novelists of the period, and in secondary source materials.

**20.565 ENGLISH ROMANTIC POETS ..... 3 sem. hrs.**

Important segments of the work of the major Romantic poets to disclose the characteristics of the work and thought of each writer. Some attention given to background of the period and its literary forebears and descendants. Inclusion of minor poets varies with the instructor's purposes.

**20.569 VICTORIAN LITERATURE ..... 3 sem. hrs.**

A study in depth of some aspect or combination of aspects of literary significance in the Victorian Age—author(s), genre, specific works.

**20.582 AMERICAN LITERATURE: EARLY ..... 3 sem. hrs.**

Prose writers and poets of Colonial and Federalist America: Mather, Taylor, Edwards, Woolman, Franklin, Paine, Jefferson, Freneau, Irving, and Bryant. The nature of Puritanism and its role in the literature of these periods.

**20.583 AMERICAN LITERATURE: MIDDLE ..... 3 sem. hrs.**

Major American writers in the American Renaissance and other important figures of the 19th century: de Tocqueville, Emerson, Thoreau, Hawthorne, Melville, Whitman, Twain, Lincoln, and James. Particular emphasis is given to the reaction of these writers to Puritanism and the imaginative literature stemming from it.

**20.584 AMERICAN LITERATURE: MODERN ..... 3 sem. hrs.**

Since much of 20th century American literature achieves its greatest intensity in being critical of native traditional values, the course examines such representative writers as Allen, Krutch, Dreiser, Lewis, Anderson, Hemingway, Fitzgerald, Faulkner, Eliot, Steinbeck, Ellison and Bellow.

**20.587 MAJOR AMERICAN AUTHORS ..... 3 sem. hrs.**

Study of one or more major writers in American literature. Authors included vary with each presentation of the course.



# SPEECH

(Code 25)

## Specialization in Speech for the Master of Education Degree

Required: Speech 25.501 or 25.510;

Speech 25.502 or 25.557.

Elective: Eighteen semester hours in one of two areas:

Public Address: 25.503, 25.504, 25.505, 25.515, 25.520, 25.530,  
25.585, 25.590.

Theatre: 25.551, 25.553, 25.554, 25.558, 25.560, 25.565, 25.566,  
25.570, 25.575, 25.577, 25.580, 25.590.

If 25.590 (Master's Research Paper) is not included, the candidate must submit a departmental paper.

### 25.501 INTRODUCTION TO RESEARCH IN SPEECH ..... 3 sem. hrs.

An overview of the fields of research in Speech and an examination of the contributions of professional Speech organizations, graduate studies and research. Historical, descriptive, experimental and evaluating research studies are examined. The research problem, bibliographical resources, and examination of methods in depth. Professional writing, the research paper and current graduate studies are analyzed. A pilot thesis is required of each student to demonstrate competency in research techniques and the use of bibliographical resources.

### 25.502 RHETORICAL CRITICISM ..... 3 sem. hrs.

The nature of rhetorical criticism. The development of rhetorical theory from the Homeric period to the modern theorists. Methods of the critics during antiquity, the intermediate period (1600-1850) and methods of the modern critics. Rhetorical criticism areas for investigation in terms of textual authority and reconstruction of social settings. Standards of judgment in relationship to ideas, emotion in speech, *ethos*, structure and rhetorical philosophy.

### 25.503 HISTORY AND CRITICISM OF AMERICAN PUBLIC ADDRESS ..... 3 sem. hrs.

Evaluation and discussion of the development and application of rhetoric in America in terms of the speaker, speech and times. American speakers, selected from a cross-section in history prestudied from the viewpoints of biographical background, nature and extent of speaking, audience reaction, the speaker's basic ideas, his preparation, arrangement and style, basic philosophy, and platform behavior.

### 25.504 BRITISH ORATORY ..... 3 sem. hrs.

Burke, Fox, Sheridan, George, Bevan, Churchill and other orators in the 17th through the 20th centuries. Analysis of style, philosophies, and effectiveness, and their contribution to rhetorical theory.

**25.505 ANCIENT RHETORIC ..... 3 sem. hrs.**

The ancient rhetoricians Aristotle and Plato, Cicero, Longinus and Quintilian. Emphasis is on the analysis and critical concepts of these men, with a study of later interpretations of their works.

**25.510 CURRENT PROBLEMS IN SPEECH ACTIVITIES .... 3 sem. hrs.**

Current speech practices in the secondary school. Methods of initiating, improving, and expanding speech programs.

**25.515 ADVANCED PERSUASION AND PROPAGANDA ... 3 sem. hrs.**

Techniques of attitude modification through persuasion and propaganda. Practical application of the techniques by each student.

**25.520 ADVANCED ORAL INTERPRETATION ..... 3 sem. hrs.**

Understanding and appreciation of literature through developing skill in reading aloud. Selecting, adapting, and preparing material for presentation in high school classes.

*Prerequisite: Consent of instructor.*

**25.530 ADVANCED RADIO AND TELEVISION ..... 3 sem. hrs.**

Practice and study of techniques of television announcing, writing (news and drama), directing, program planning, and performing. Instructional radio and television. Laboratory hours required.

*Prerequisite: Beginning course in Radio and Television.*

**25.551 ADVANCED ACTING ..... 3 sem. hrs.**

Study and research, with performance, of the acting styles in each of the major historical periods of world theatre. Laboratory hours.

*Prerequisite: Consent of instructor.*

**25.553 ADVANCED COSTUMING ..... 3 sem. hrs.**

History of costuming from the viewpoint of design and construction. Costume wardrobe, fabrics, budget. Each student designs and builds costumes for a major production. Laboratory hours.

**25.554 ADVANCED DIRECTING ..... 3 sem. hrs.**

Advanced play production principles and their application to the staging of classical and modern plays. Analysis of the non-realistic styles from the Greek to the Theatre-of-the-Absurd. Each student directs a play. Laboratory hours.

*Prerequisite: Consent of instructor.*

**25.557 THEATRICAL CRITICISM ..... 3 sem. hrs.**

Theatrical criticism from Aristotle's *Poetics* to present day. Emphasis is on the comic and tragic theories. Analysis of critical standards and methods; their application to evaluating drama in performance.

**25.558 WORLD THEATRE ..... 3 sem. hrs.**

A study in depth of the theatres throughout the world in their historical and contemporary context. The student should have had some course work in history of the theatre, criticism, or dance before electing

the course.

*Prerequisite: Consent of instructor.*

**25.560 PLAYWRITING ..... 3 sem. hrs.**

Dramatic structure, writing styles, and types of drama. Each student writes at least one play. Adaptations of other forms of literary works are examined.

**25.565 ADVANCED THEATRE PRODUCTION ..... 3 sem. hrs.**

Designed to provide technical information and skills needed to mount a play or a musical. Advanced stagecraft and stage carpentry.

*Prerequisite: Consent of instructor.*

**25.566 THEATRE DESIGN AND LIGHTING ..... 3 sem. hrs.**

Principles and styles of design and lighting as applied to period and modern drama. Each student is required to design the setting and lighting of a show outside of the modern period and to present detailed drawings and elevations of his/her design in a production book.

*Prerequisite: Consent of instructor.*

**25.570 LITERATURE OF THE THEATRE ..... 3 sem. hrs.**

A study of the plays, playwrights and dramatic literature of the theatre's "golden ages," with a view to their production on a contemporary stage.

**25.575 EXPERIMENTAL THEATRE ..... 3 sem. hrs.**

An investigation and analysis of theatrical styles outside the realistic theatre. Plays and scenes studied and presented in their original style and form. The non-illusionistic theatre is given primary consideration.

*Prerequisite: Directing.*

**25.577 THEATRE MANAGEMENT ..... 3 sem. hrs.**

Designed for the director of the theatre in the secondary school. Box office, publicity, house management, and organization of the theatre staff. Public relations; budget; business practices.

**25.580 THEATRE SEMINAR ..... 3 sem. hrs.**

Specialized study by the class. The subject is selected by the instructor from Theatre.

**25.585 PUBLIC ADDRESS SEMINAR ..... 3 sem. hrs.**

Specialized study by the class. The subject is selected by the instructor from Public Address.

**25.590 MASTER'S RESEARCH PAPER ..... 3 sem. hrs.**

An opportunity is provided for the student to demonstrate his/her ability to employ accepted methods of carrying on and reporting research in the solution or intensive study of some area of interest or concern.

## 3.2 SOCIAL SCIENCES

(Codes 40-48)

### Master of Education Program in Comprehensive Social Studies

Notes: Comprehensive Social Studies is defined as comprising Economics (40), Geography (41), Political Science (44), Sociology (45), and Anthropology (46).

**Concentration:** A minimum of fifteen semester hours in history or geography or political science as approved by the adviser, including a research paper or a seminar course.

**Related Field:** A minimum of six semester hours in one related field as recommended by the adviser. (After one discipline has been chosen for the concentration, the remaining five disciplines designated above are termed "related field.")

**Comprehensive Examination:** A comprehensive examination is required.

**Elective:** Electives, if needed to complete the minimum of thirty semester hours, must be taken in social studies and approved by the adviser. The amount of elective credit can be deduced from Section 2.22.

## ECONOMICS

(Code 40)

### 40.513 ORIGIN AND DEVELOPMENT OF CAPITALISM ..... 3 sem. hrs.

Transition from feudalism to capitalism and the subsequent influence of leading capitalist institutions on industry, agriculture, commerce, banking, and the social movement.

### 40.515 PUBLIC POLICY AND BUSINESS ..... 3 sem. hrs.

Public policies affecting the economy: historical, philosophical and legal basis of regulation; the rationale of free enterprise. Intensive analysis of selected areas of economic policy related to government action.

### 40.531 CURRENT ECONOMIC PROBLEMS ..... 3 sem. hrs.

Selected economic problems of current interest and concern to our society. Basic economic principles and theories and the thinking of recognized economists of the past and present as revealed in their published works.

### 40.532 COMPARATIVE ECONOMIC SYSTEMS ..... 3 sem. hrs.

A comparison of the workings and performance of the major forms of economic organization. The capitalist systems; the modern welfare states; state capitalism; communism; and socialism.

**40.533 INTERNATIONAL ECONOMIC POLICIES  
AND RELATIONS ..... 3 sem. hrs.**

Application of modern international economic and financial analyses to emerging contemporary problems of nations trading with one another. Selected topics include customs unions; optimum currency area; international cartels; and flexible exchange rates. Impact of governmental and intergovernmental relations and regulations.

## **GEOGRAPHY**

### **Specialization in Geography for the Master of Education Degree**

**Purpose:** This specialization in geography is intended to increase the student's mastery of the discipline as a contribution to his/her background for teaching, and so enhance his scholarly background in research techniques, interpretation of data, and format of scientific writing.

**Required:** Twenty-four semester hours in geography, including a Master's Research Paper or a departmental paper or seminar (41.590). Certain courses may be scheduled in related areas with the approval of the department.

**Elective:** Courses in categories 41 and 51 as approved by the adviser. The amount of elective credit required can be deduced from the comprehensive plan for the degree (See Section 2.22).

### *COURSES*

#### **GEOGRAPHY**

(Code 41)

**41.462 THEORETICAL AND QUANTITATIVE  
GEOGRAPHY ..... 3 sem. hrs.**

Conceptual frameworks, theoretical developments, methods of measuring intensity and dispersion of geographical distributions; quantitative approaches in geographical analyses.

**41.501 EVOLUTION OF GEOGRAPHIC THOUGHT ..... 3 sem. hrs.**

Evolution of concepts concerning the nature, scope and methodology of geography. History of geographic ideas from early Greek, Roman and Arab geographies to the present era. British, French, German and American schools of geographic thought.

**41.510 REGIONAL GEOMORPHOLOGY OF THE  
UNITED STATES ..... 3 sem. hrs.**

A comprehensive study of geomorphic regions; parameters used for classifying geomorphic provinces; dominant geologic processes which are responsible for the topographic expression.

**41.523 THE GEOGRAPHY OF SETTLEMENT ..... 3 sem. hrs.**

The facilities men build in the process of occupying an area ranging from the primitive to the complex urban agglomeration. Bases upon which settlements are founded and nurtured and their site, situation, external relationships and internal structure and morphology.



**41.524 GEOGRAPHY OF TRADE  
AND TRANSPORTATION ..... 3 sem. hrs.**

Basic concepts and principles. Problems of land and air transportation; establishment of ports, railroad centers and airways to handle commodity exchanges. Trade and transportation as important geographic factors in regional development.

**41.548 POLITICAL GEOGRAPHY ..... 3 sem. hrs.**

Geography foundations of political events and conditions; geographic factors significant to the formation, growth, and political behavior of states with problems such as boundaries, population distribution and other tensions.

**41.549 GEOGRAPHY OF WORLD RESOURCES  
AND INDUSTRIES ..... 3 sem. hrs.**

Survey of the lands and seas of the world in terms of climate, soils, natural vegetation, energy sources, minerals, and fishery products; industrial production and potential, its availability and the distribution of its products.

**41.556 GEOGRAPHY OF PENNSYLVANIA ..... 3 sem. hrs.**

The development of regional understandings of Pennsylvania, emphasizing man's response to changing environment; resources of the state, their extent, their use, and the need for a planned conservation program.

**41.560 GEOGRAPHY OF SOUTH AMERICA ..... 3 sem. hrs.**

The course provides an opportunity to evaluate the relative importance of environmental and cultural factors in accounting for the existence of empty and overcrowded land in the same country. Problems such as this, with implications for the entire "underdeveloped" world, are examined from the geographic point of view.

**41.566 GEOGRAPHY OF ANGLO-AMERICA ..... 3 sem. hrs.**

Some of the dynamic changes taking place in the United States and Canada which are affecting the size, shape, and character of the traditional geographic regions with reference to technology, social and demographic conditions. Domestic and international policies and agreements and alterations in the resource base.

**41.571 GEOGRAPHY OF AFRICA  
SOUTH OF THE SAHARA ..... 3 sem. hrs.**

Political and technical change as affected by geography. These aspects and the traditional interests of the regional geographer are examined against the background of problems presented by the physical geography of this unique part of the world.

**41.575 GEOGRAPHY OF WESTERN AND  
MEDITERRANEAN EUROPE ..... 3 sem. hrs.**

An intensive treatment of selected areas of Western and Mediterranean Europe in terms of physical, economic, and cultural circumstances from the viewpoint of geographical influence.

**41.576 GEOGRAPHY OF SOUTH AND EAST ASIA ..... 3 sem. hrs.**

The physical, economic and cultural geography of a region Pakistan through Manchuria. Present circumstances and world relationships.

**41.590 SEMINAR IN GEOGRAPHY ..... 3 sem. hrs.**

Individual students pursue in depth selected topics in geography that vary according to the student's interest and need; these provide bases for seminar discussion.

**41.599 DEPARTMENTAL RESEARCH PAPER ..... 3-6 credits**

(Departmental Paper)—Master's Thesis.

## EARTH SCIENCE

(Code 51)

**51.451 FIELD TECHNIQUES IN  
EARTH AND SPACE SCIENCE ..... 6 sem. hrs.**

Intensive field training in the use of equipment and techniques in geology, astronomy, meteorology and cartography.

## HISTORY

(Code 42)

### The Master of Arts Degree

**Prerequisites:** An undergraduate major in history including a course in Bibliography and Research is prerequisite to departmental recommendation for admission to candidacy. Undergraduate deficiencies must be made up without credit.

**Course and Thesis Requirements:** A major of eighteen semester hours is required in one of the three areas of history; the major must include a course in Readings and a Seminar course. A minor of six semester hours must be taken in a second area of history; the minor will usually include the colloquium course in that area. (With permission, the minor may be taken in one of the related fields in the social studies.)

A six semester hour thesis (42.599) is required. The thesis topic must be approved by the adviser. It is the student's responsibility to secure a faculty member to direct the thesis.

An oral defense of the thesis is required.

**Foreign Language:** The candidate must demonstrate a reading knowledge of French, German, Russian, Spanish or another language approved by the adviser and applicable to the thesis work. The History faculty will guide the student in his/her preparation for the language examination and, wherever possible, will select and administer the material for translation.

**Comprehensive Examination:** An oral and/or written examination—the initial form of which is at the option of the student—separate from the defense of thesis is required. It will cover the broad background of the major area of history (European, Non-Western or United States) pursued by the student plus one specific concentration (national or topical) within the major area. The examination will be tailored to the needs of the student

through advance consultation between the student and his/her committee. The examination is conducted by a committee selected by the student's adviser; it may not be taken prior to the last term of course work; it must be completed before the thesis is submitted.

### Specialization in History for the Master of Education Degree

Course Requirements: Fifteen semester hours in one of the three designated areas of history, including a readings and seminars course; six or nine semester hours in a minor field of history.

#### COURSES

(Code 42)

##### Senior Level Courses Open to Graduate Students

*(For course descriptions, see Undergraduate Bulletin)*

42.412	CENTRAL EASTERN EUROPE SINCE 1815 .....	3 sem. hrs.
42.424	EUROPE 1914-1939; THE FIRST WORLD WAR AND THE AGE OF THE DICTATORS .....	3 sem. hrs.
42.425	EUROPE SINCE 1939 .....	3 sem. hrs.
42.452	(357) SOVIET RUSSIA .....	3 sem. hrs.
42.453	PROBLEMS OF CONTEMPORARY LATIN AMERICA .....	3 sem. hrs.
42.454	CHINA AND JAPAN IN THE TWENTIETH CENTURY .....	3 sem. hrs.
42.455	SOUTHEAST ASIA .....	3 sem. hrs.
42.456	SELECTED PROBLEMS IN AFRICA AND IN THE NEAR AND MIDDLE EAST .....	3 sem. hrs.
42.461	THEMES IN AFRO-AMERICAN HISTORY .....	3 sem. hrs.
42.471	THE INDUSTRIAL REVOLUTION IN THE UNITED STATES .....	3 sem. hrs.
42.472	HISTORY OF LABOR IN THE UNITED STATES .....	3 sem. hrs.
42.481	UNITED STATES SOCIAL HISTORY AND POPULAR CULTURE TO 1860 .....	3 sem. hrs.
42.482	UNITED STATES SOCIAL HISTORY AND POPULAR CULTURE SINCE 1860 .....	3 sem. hrs.

- 42.510 READINGS IN EUROPEAN HISTORY ..... 3 sem. hrs.**  
 Readings, reports and discussions on a selected topic in the history of Europe.
- 42.511 READINGS IN EUROPEAN HISTORY ..... 3 sem. hrs.**  
 Continuation.
- 42.512 READINGS IN EUROPEAN HISTORY ..... 3 sem. hrs.**  
 Continuation.
- 42.513 READINGS IN EUROPEAN HISTORY ..... 3 sem. hrs.**  
 Continuation.
- 42.518 READINGS IN THE HISTORY OF  
 THE SOVIET UNION ..... 3 sem. hrs.**  
 Readings, reports, and discussion on selected topics in the history of the USSR.
- 42.526 SELECTED TOPICS IN EUROPEAN  
 IMPERIALISM SINCE 1870 ..... 3 sem. hrs.**  
 Colonial policy of the major European colonial powers in Africa, Asia, and Melanesia, its impact upon mother country and colonies, and the dissolution of colonial empires after World War II.
- 42.530 HISTORY OF EUROPE, 1900-1923 ..... 3 sem. hrs.**  
 Internal and external policies of the European powers, the crisis leading to World War I, the military campaigns, the peace treaties of 1919, and the upheavals following the new distribution of power.
- 42.532 HISTORY OF EUROPE, 1923-1945 ..... 3 sem. hrs.**  
 Political and economic crises of the 1920's; the rise of dictatorship and the political crisis leading to the Second World War; campaigns and diplomacy of the war; the condition in which it left the belligerents.
- 42.534 THE EUROPEAN UNIFICATION MOVEMENT ..... 3 sem. hrs.**  
 Efforts of the Western European nations to achieve economic, military, and political unity since 1945.
- 42.536 STUDIES IN THE COLD WAR ..... 3 sem. hrs.**  
 Causes, characteristics, and evolution of the Cold War from 1947 to the present.
- 42.539 READINGS IN NON-WESTERN HISTORY ..... 3 sem. hrs.**  
 Readings, reports and discussion on a selected topic in the history of non-western areas.
- 42.540 READINGS IN NON-WESTERN HISTORY ..... 3 sem. hrs.**  
 Continuation.

- 42.541 READINGS IN NON-WESTERN HISTORY ..... 3 sem. hrs.**  
Continuation.
- 42.542 READINGS IN NON-WESTERN HISTORY ..... 3 sem. hrs.**  
Continuation.
- 42.552 FAR EASTERN ASIA STUDIES ..... 3 or 6 sem. hrs.**  
Selected topics in inter-Asian relations with a concentration on China and Japan.
- 42.554 CONTEMPORARY FAR EASTERN CULTURES ..... 3 sem. hrs.**  
Selected Far Eastern Cultures including interdisciplinary study and a review of communication and the arts.
- 42.556 TWENTIETH CENTURY MEXICO AND  
THE CARIBBEAN ..... 3 sem. hrs.**  
An examination of selected political, social, and economic problems of Mexico and the Caribbean area in recent decades with emphasis on the contention of forces for stability and radical change (respectively) in the region.
- 42.560 SEMINAR IN NON-WESTERN HISTORY ..... 3 sem. hrs.**  
Lectures, reports and a research paper on an area on non-western history.  
*Prerequisite: At least nine credits of graduate work in History.*
- 42.561 SEMINAR IN NON-WESTERN HISTORY ..... 3 sem. hrs.**  
Continuation.
- 42.562 SEMINAR IN NON-WESTERN HISTORY ..... 3 sem. hrs.**  
Continuation.
- 42.563 SEMINAR IN NON-WESTERN HISTORY ..... 3 sem. hrs.**  
Continuation.
- 42.564 SEMINAR IN EUROPEAN HISTORY ..... 3 sem. hrs.**  
Lectures, reports and a research paper on an area of the history of Europe.  
*Prerequisite: At least nine credits of graduate work in History.*
- 42.565 SEMINAR IN EUROPEAN HISTORY ..... 3 sem. hrs.**  
Continuation.
- 42.566 SEMINAR IN EUROPEAN HISTORY ..... 3 sem. hrs.**  
Continuation.
- 42.567 SEMINAR IN EUROPEAN HISTORY ..... 3 sem. hrs.**  
Continuation.



- 42.570 READINGS IN U.S. HISTORY ..... 3 sem. hrs.**  
 Readings, reports and discussions on topics selected from cultural, diplomatic, economic, intellectual, or military aspects of the history of the United States.
- 42.571 READINGS IN U.S. HISTORY ..... 3 sem. hrs.**  
 Continuation.
- 42.572 READINGS IN U.S. HISTORY ..... 3 sem. hrs.**  
 Continuation.
- 42.573 READINGS IN U.S. HISTORY ..... 3 sem. hrs.**  
 Continuation.
- 42.575 SEMINAR IN U.S. HISTORY ..... 3 sem. hrs.**  
 Lecture, reports and a research paper on an area of the history of the United States.  
*Prerequisite: At least nine credits of graduate work in History.*
- 42.576 SEMINAR IN U.S. HISTORY ..... 3 sem. hrs.**  
 Continuation.
- 42.577 SEMINAR IN U.S. HISTORY ..... 3 sem. hrs.**  
 Continuation.
- 42.578 SEMINAR IN U.S. HISTORY ..... 3 sem. hrs.**  
 Continuation.
- 42.580 UNITED STATES-LATIN AMERICAN  
 RELATIONS ..... 3 sem. hrs.**  
 Diplomatic exchanges between the United States and the twenty Hispanic American republics are examined together with economic, cultural, and social contacts. Factors that have contributed to a lack of hemispheric solidarity.
- 42.581 UNITED STATES AND FAR EASTERN  
 RELATIONS ..... 3 sem. hrs.**  
 An analysis of the interest and concern of United States diplomacy with the Far East from the mid-nineteenth century to the present. Particular attention is given to changing relations with the Philippines, China, and Japan and to various attempted solutions to regional problems.
- 42.582 THE UNITED STATES AS A WORLD POWER ..... 3 sem. hrs.**  
 The emergence of the United States into the world order, its roles in the Councils of the world, its responsibilities in world leadership, its encouragement of democratic systems.
- 42.585 COLONIAL AMERICAN INSTITUTIONS ..... 3 sem. hrs.**  
 The roles of religious, educational, philanthropic, political, and business institutions in America before 1790.

**42.586 AMERICAN URBAN HISTORY ..... 3 sem. hrs.**

The origins and consequences of the growth of urban centers upon American economic, political and social institutions.

**42.587 STUDIES IN PENNSYLVANIA HISTORY ..... 3 sem. hrs.**

Through a combination of lectures and research projects students investigate significant statewide, area or local aspects of Pennsylvania history. Specific chronological or topical emphases may be selected by the instructor.

**42.588 THE TRANS-MISSISSIPPI WEST ..... 3 sem. hrs.**

The origins, course, and consequences of American expansion across the Mississippi River.

**42.589 HISTORY SEMINAR ..... 3 sem. hrs.**

Lectures, reports and a research paper which a student may take in the area of special interest— i.e., American, European or Non-Western History.

**42.590 HISTORY SEMINAR ..... 3 sem. hrs.**

Continuation.

**42.591 HISTORY SEMINAR ..... 3 sem. hrs.**

Continuation.

**42.592 HISTORY READINGS ..... 3 sem. hrs.**

Readings, reports and discussion on a selected topic in American, European or Non-Western History which is tailored to the student's area of special interest.

**42.593 HISTORY READINGS ..... 3 sem. hrs.**

Continuation.

**42.594 HISTORY READINGS ..... 3 sem. hrs.**

Continuation.

**42.599 THESIS ..... 6 sem. hrs.**

Independent research and the preparation of a formal paper required in partial satisfaction of the requirements for the degree Master of Arts.

## POLITICAL SCIENCE

(Code 44)

### Major in Political Science for the Master of Arts Degree

Prerequisites: Twenty-four semester hours in undergraduate courses in political science distributed among U.S. government, foreign governments, international politics and political theory and methodology. Courses in

other social science disciplines may be considered by the Department to modify the prerequisite. Undergraduate deficiencies must be made up without credit toward the master's degree.

**Course Requirements:** A minimum of 30 semester hours including: a thesis (44.598—6 sem. hrs.); 18 to 24 semester hours in Political Science courses in at least three out of the four fields of U.S. government, foreign governments, international politics, political theory and methodology; and 0 to 6 semester hours in cognate disciplines as approved by the department.

**Examinations:**

- (1) Comprehensive written examinations in three political science fields, as arranged by a departmental committee.
- (2) An oral defense of the thesis.

### **Specialization in Political Science for the Master of Education Degree**

**Prerequisites:** Extensive undergraduate course work in the social sciences including courses in the major subfields of Political Science.

**Course Requirements:** Thirty semester hours of course work with a minimum of fifteen semester hours in Political Science and six in Education (See Section 2.22). Options for the remaining nine semester hours include up to nine hours in Political Science, up to six hours in cognate areas, and up to three hours in Education (see Section 2.22). Programs must be approved by the departmental adviser.

**Examination:** A comprehensive written and oral examination is required as a condition for graduation. For total degree requirements see Section 2.22.

#### **44.405 (433) THE DEVELOPMENT OF POLITICAL THOUGHT ..... 3 sem. hrs.**

Selected political theorists from Plato to Nietzsche are compared with contemporary American political theorists in an attempt to build bridges between traditional and contemporary theories and theorists. Included are: Plato and Strauss, Thucydides and Max Weber, Aristotle and Lipset, Augustine and Morgenthau, Machiavelli and Neustadt, Rousseau and Dewey, Aquinas and Maritain, Hobbes and Riker, Burke and Lippmann, Marx and C. Wright Mills, and John Stuart Mill and Christian Bay.

#### **44.409 (532) AMERICAN POLITICAL THOUGHT ..... 3 sem. hrs.**

An analysis of the relationship of American political thought to contemporary political science by using traditional materials in a historical, chronological way but reworking them to show their relation and relevance to actions and institutions. Included are the main ideas of the leading political thinkers in America from the Colonial period to the present.

#### **44.418 COMPUTER APPLICATIONS IN POLITICAL SCIENCE ..... 3 sem. hrs.**

An introduction to the principal computer languages used in political science and the social sciences (primarily FORTRAN) and the application of computers to political science research and problem solving.

**44.429 (317) BLACK POLITICS ..... 3 sem. hrs.**

An analysis of the role of Blacks in American politics, the Black Power movement, civil rights, and racial conflict.

**44.437 PUBLIC ADMINISTRATION APPLICATIONS ..... 3 sem. hrs.**

An analysis of the method and techniques in the application of administrative organizational theory to the operations of governmental bureaucracies. Topics covered include: Program Planning Budgeting Systems (PPBS), Program Evaluation Review Technique (PERT), and Operations Research (OR).

**44.440 THE PRESIDENT AND CONGRESS ..... 3 sem. hrs.**

Presidential and congressional politics; public policy-making roles; executive-legislative relationships; constitutional issues; problem areas and proposals for reform.

**44.446 (451) CONSTITUTIONAL LAW ..... 3 sem. hrs.**

An analysis of the evolution, structure and function of the Supreme Court, concentrating on a case study approach of the Court's interpretations of the commerce and taxing powers, federal-state relationships and civil rights.

**44.448 (518) THE JUDICIAL PROCESS ..... 3 sem. hrs.**

Judicial policy making is studied through systems theory, group theory, and judicial attitude and behavior.

**44.453 (311) URBAN GOVERNMENT AND POLITICS ..... 3 sem. hrs.**

An analysis of the structure and function of city governments, decision-making in urban politics, groups and group conflict, metropolitics, the megalopolis, and contemporary problems of the American city.

**44.458 (513) U.S. FOREIGN POLICY ..... 3 sem. hrs.**

An analysis of the substance, methods, and purposes of U.S. foreign policy including the determinants of our foreign policy, policy-making machinery, the implementation of our foreign policy, and contemporary foreign policy problems.

**44.463 THE U.S.S.R. POLITICAL SYSTEM ..... 3 sem. hrs.**

The governmental process in the U.S.S.R.; the role of the Communist Party; the evolving ideology from Marx to the present; Soviet bloc politics.

**44.464 GOVERNMENT AND POLITICS OF IRELAND I ..... 3 sem. hrs.**

A survey of historic, social, cultural, and religious developments in Ireland, with concentration on a study of the government and politics of Northern Ireland and the Irish Republic. Contemporary literature, drama, music, and art.

**44.465 GOVERNMENT AND POLITICS OF IRELAND II .... 3 sem. hrs.**

A study-tour of Northern Ireland and the Irish Republic including visits to museums, galleries, theaters and historic sites, and meetings with governmental and political leaders. Approximately half of the time spent in Dublin, the remainder on a bus trip through the Republic and Northern Ireland.

**44.487 (525) INTERNATIONAL LAW AND ORGANIZATIONS ..... 3 sem. hrs.**

The theoretical and practical implications of the legal and organizational efforts to regulate international relations without violent conflict: international law, the United Nations, the International Court of Justice, and several regional and functional organizations.

**44.491 READINGS IN GOVERNMENT AND POLITICS ..... 3 sem. hrs.**

Topics are selected through consultation between instructor and student. Designed for both group and individual study.

**44.492 (470) SEMINAR IN GOVERNMENT AND POLITICS ..... 3 sem. hrs.**

Selected problems in government and politics are studied in an attempt to review and unify theories and methods of political science. Individual research projects.

**44.507 MODERN POLITICAL THOUGHT ..... 3 sem. hrs.**

Contributions of major political thinkers from the 17th through the 20th centuries are examined together with the ideas of selected minor political philosophers and political themes of the age.

**44.512 EMPIRICAL THEORY ..... 3 sem. hrs.**

A survey of contemporary theory with emphasis on systems analysis, cybernetics, communications-information theory, content analysis, game theory, and value theory.

**44.538 PROBLEMS OF PUBLIC ADMINISTRATION ..... 3 sem. hrs.**

Current trends and problems in the organization and management of governmental departments, agencies, and commissions. Several public policies of current relevance are studied in terms of their administrative dimension.

**44.556 PROBLEMS OF U.S. GOVERNMENT ..... 3 sem. hrs.**

Underlying structural problems emanating from the clash of constitutional theories; current stresses and strains in the U.S. system; selected problems studied in depth.

**44.575 CROSS-POLITY ANALYSIS ..... 3 sem. hrs.**

Current developments in comparative politics, comparative methods and techniques, problems of cross-cultural comparisons.



**44.578 POLITICS OF THE EMERGING NATIONS ..... 3 sem. hrs.**

Neutralism, non-alignment, and other ideologies of emergent nations; political implications of economic development in the new states.

**44.585 PROBLEMS OF WORLD POLITICS ..... 3 sem. hrs.**

An in-depth analysis of selected topics of current significance in the political relationships among national political systems and supranational organizations.

**44.590 ADVANCED INDEPENDENT STUDY IN  
POLITICAL SCIENCE ..... 3 sem. hrs.**

Designed primarily for individualized reading, research and reporting under conditions of minimal supervision. Projects must have Departmental approval and be underway by the end of the first week of the term.

**44.594 ADVANCED SEMINAR IN GOVERNMENT  
AND POLITICS ..... 3 sem. hrs.**

A review of the scope and methods of contemporary political science. Current literature is explored by means of individually prepared seminar papers.

**44.598 MASTER OF ARTS THESIS ..... 6 sem. hrs.**

Independent reserach and the preparation of a formal thesis in partial fulfillment of the requirements for a Master of Arts degree in Political Science.

**44.599 MASTER'S RESEARCH PAPER ..... 3 sem. hrs.**

Independent research on a topic approved by the Department of Political Science.

**SOCIOLOGY**

(Code 45)

**44.441 SOCIAL INDICATORS ..... 3 sem. hrs.**

Designed to reinforce and extend earlier learning in research techniques and methods by focusing upon systematic step-by-step understanding, analysis and preparation of social indicators at the federal, state, and local levels of social policy planning and analysis. The emphasis is on developing student understanding of social indicators and their use in planning.

**44.443 SOCIOLOGY OF DEVIANT BEHAVIOR ..... 3 sem. hrs.**

Review and analysis of various forms of deviant behavior, including the effects of urbanization on the individual. Social deviation is studied in the light of contemporary concepts and theories in sociology.

**44.450 COMMUNICATION THEORY IN  
SOCIAL WORK PRACTICES ..... 3 sem. hrs.**

Analysis and application of concepts from communication, information, and systems theory to social work practice. The communications

models offer fresh perspectives to social work phenomena and process which avoid the effects of labeling (self-fulfilling prophecy, system contamination, etc.) and the weaknesses of linear causal models and other content-laden heuristic principles. Development of understanding of the relevant systems, the communications process itself, and ways to improve professional and personal transactions.

**45.467 HUMAN POPULATION STUDY ..... 3 sem. hrs.**

Distribution of population, its composition, and other characteristics; it analyzes the size, trend, growth and future developments of population, and examines the impact of population problems as influenced by processes of fertility, mortality, and migration.

**45.468 SOCIAL SERVICES PLANNING ..... 3 sem. hrs.**

Social context of the theories and practices of social planning, social policy and social services from contemporary and cross-cultural perspectives.

**45.511 SOCIAL INSTITUTIONS ..... 3 sem. hrs.**

Emphasis on the family as the basic unit in meeting human needs; comparative study of the larger social institutions; impact of cultural and special interest groups on American society.

**45.513 ADOLESCENT IN AMERICAN SOCIETY ..... 3 sem. hrs.**

The American adolescent, his development in the society and his influence on society. Problems concerning the adolescent are considered in light of current thinking and research.

**45.523 THE CONTEMPORARY AMERICAN COMMUNITY ..... 3 sem. hrs.**

Function of the local area in meeting human needs; rural, urban and metropolitan areas of social and economic organization; role of public and voluntary health, welfare and recreational agencies.

**45.525 CURRENT SOCIAL ISSUES ..... 3 sem. hrs.**

Analysis of current social issues and solutions offered to solve them. Issues and solutions are explored within the broad framework of the social sciences and the specific framework of sociological and anthropological data.

## **ANTHROPOLOGY**

(Code 46)

**46.430 CULTURES AND PEOPLES OF OCEANIA ..... 3 sem. hrs.**

Types of aboriginal culture and the distribution of languages and physical types in the Pacific-Island world, with attention paid to archaeological evidence and migration routes from Malasia to Melanesia and Polynesia.

**46.450 PEOPLES AND CULTURES OF SOUTH AMERICA ..... 3 sem. hrs.**

A general survey of an introduction to the aboriginal, non-literate cultures of South America, including the ecological background, archaeology, and cultura patterns.

**46.470 HISTORY OF ANTHROPOLOGICAL THOUGHT AND THEORY ..... 3 sem. hrs.**

This course surveys intensively the leading methods and theories of anthropological and ethnological interpretation, with special emphasis on the concept of culture and its practical application to modern problems.

**46.481 CULTURAL DYNAMICS ..... 3 sem. hrs.**

An analysis of the development of culture from primates to the present. Processes of cultural change: "cultural evolution," diffusion, innovation and invention; role of the social environment; relationship between human biology and cultural capacity with reference to recent studies of primates, sexology, linguistics, ecology and physical anthropology.

**46.490 SOCIALIZATION OF THE CHILD IN PRIMITIVE SOCIETY ..... 3 sem. hrs.**

A comparative analysis of the socialization process as it occurs in selected non-western cultures. Life experience and adjustment of the individual through infancy, middle childhood and youth. Contrasting methods of introducing children to adult economic, social, biological behavior are described.

**46.524 COMPARATIVE CULTURES ..... 3 sem. hrs.**

Analysis of selected non-literate societies, illustrating various degrees of complexity in material and non-material culture and the relation of the individual to them; audio-visual background materials are used.

## PSYCHOLOGY

(Code 48)

**48.511 CHILDHOOD AND ADOLESCENCE ..... 3 sem. hrs.**

Advanced study of theories and processes of development through childhood and adolescence, with emphasis on current trends and issues.

**48.521 GROUP PSYCHOLOGICAL TESTING ..... 3 sem. hrs.**

Critical examination of psychological tests, scales and inventories suitable for group evaluation and guidance services in public schools. Development of skills in administration and interpretation.

**48.525 INDIVIDUAL INTELLIGENCE TESTING ..... 3 sem. hrs.**

Analysis of the nature and rationale of various individual tests of intelligence. Skills and methods in administering tests, and in scoring, interpreting and reporting results.

48.576	THEORIES OF HUMAN LEARNING .....	3 sem. hrs.
	Study of historical and contemporary learning systems and models which yield principles for practical application.	
	<i>Note: The following senior level undergraduate courses are also open to graduate students: (For course descriptions, see the undergraduate catalogue.)</i>	
48.416	PROBLEMS OF ADOLESCENCE .....	3 sem. hrs.
48.436	THEORIES OF PERSONALITY .....	3 sem. hrs.
48.451	LABORATORY TRAINING IN GROUP PROCESS .....	3 sem. hrs.
48.454	PSYCHOLOGICAL STUDY OF SOCIAL ISSUES .....	3 sem. hrs.
48.462	ADVANCED EXPERIMENTAL PSYCHOLOGY .....	3 sem. hrs.
48.464	ADVANCED EXPERIMENTAL DESIGN .....	3 sem. hrs.
48.466	RESEARCH PROJECTS .....	3 sem. hrs.
48.471	PSYCHOLOGY OF PERCEPTION .....	3 sem. hrs.

### 3.3 SCIENCES AND MATHEMATICS

#### BIOLOGY

##### The Master of Science Degree

**Purpose:** This program is intended to prepare the student either for admission to a research-oriented doctoral degree program in biology, or employment in a biology-oriented profession.

**Prerequisite:** An undergraduate major in Biology, with one year of college physics and the equivalent of Organic Chemistry II and a course in Calculus. Undergraduate deficiencies must be made up without credit toward the master's degree.

**Requirements:** A minimum of thirty semester hours comprising: 24 semester hours graduate credit in biological science including at least 15 semester hours in courses numbered 500 or above (a limited number of courses in other areas may be included on approval of the department if they are clearly supportive of the biology major); Master's Thesis (50.593), 6 semester hours.

**Examinations:** A seminar presentation of the thesis and its results; a written and/or oral comprehensive examination administered by a committee from the department.

**Foreign Language:** Proficiency in a foreign language is strongly recommended.

## Specialization in Biology for the Master of Education Degree

**Purpose:** This specialization is intended to enhance the competence of secondary school teachers of biology by extending their scholarship in content and method through formal courses and independent study and research.

**Prerequisite:** An undergraduate major in biology with Level I certification; background in mathematics and chemistry adequate for the courses and research to be undertaken. Undergraduate deficiencies must be made up, without credit toward the degree, prior to departmental recommendation for candidacy.

**Required:** Biology 50.591 or 50.592 to fulfill the research requirement.

**Elective:** Courses are to be chosen with the adviser's approval. No more than 9 semester hours in the 400-level courses may be applied toward the degree. Secondary Education courses 65.566 and 65.567 are acceptable electives.

**Examination:** A seminar presentation of the thesis or directed study and its results; if thesis 50.592 is chosen, a written and/or comprehensive examination is required.

### 50.411 RADIATION BIOLOGY ..... 3 sem. hrs.

Effects of radiation on living organisms; nuclear structure; fundamental properties of radiation; physical, chemical, and genetic effects on plants and animals from cells to whole organisms; application of radiochemicals in biological studies. 2 hours lecture; 3 hours laboratory/week.

*Prerequisites:* 50.332, 52.232, 53.141, or consent of instructor.

### 50.431 EVOLUTION ..... 3 sem. hrs.

Study of major problems of the theory of evolution and contributions toward their solutions made by genetics, paleontology, systematics, and ecology.

*Prerequisite:* 50.332.

### 50.432, 433, 434 STUDIES IN SPECIATION ..... 3 sem. hrs. each course

Study of plants and animals in areas where biotas merge giving rise to interspecific hybridization, sequalae. A field course conducted in areas designated. Areas of study are determined by student needs.

*Prerequisites:* 50.431 or permission of the instructor. Students may not take degree credit for more than two of the three courses, 432, 433, 434.

### 50.441 CYTOLOGY AND CYTOGENETICS ..... 3 sem. hrs.

Structure and function of cytoplasmic and nuclear organelles of cells. Laboratory studies include techniques for cell, chromosome, and tissue preparation. 2 hrs. lecture, 2 hrs. laboratory/week.

*Prerequisites:* 50.332, or 50.333; 52.211 or 52.231.



**50.454 ETHOLOGY ..... 3 sem. hrs.**

Description and classification of behavior; its evolution and biological function. Mechanisms underlying behavior, especially species—typical behavior, are emphasized. 2 hrs. lecture, 3 hrs. laboratory/week.

*Prerequisites: 50.210 and 371 or consent of instructor.*

**50.455 ENVIRONMENTAL MICROBIOLOGY ..... 3 sem. hrs.**

Practical application of knowledge of micro-organisms; their effects on our environment; methods of control; sanitation regulations and testing procedures. Field trips taken when practical. 2 hrs. lecture, 3 hrs. laboratory/week.

*Prerequisite: 50.341.*

**50.457 ICHTHYOLOGY ..... 3 sem. hrs.**

Field and laboratory study of the fishes of the streams and rivers of this area including their collection, taxonomy, anatomy, and ecological methods.

*Prerequisite: 50.312 or 50.361 or consent of instructor.*

**50.459 ORNITHOLOGY ..... 3 sem. hrs.**

General biology of birds, and the study of bird identification in the field by song and sight. Study of birds of this region in relation of migration, time of arrival and nesting. Two hours lecture, three hours laboratory/week.

*Prerequisite: 50.102 or 50.210.*

**50.463 BIOLOGICAL PHOTOGRAPHIC TECHNIQUES ..... 3 sem. hrs.**

Theory and practice of photography as applied to biology, including negative and print making, gross specimen photography, copying, transparencies, filmstrips, auto-radiography, nature work in closeups, photomicrography, thesis illustrations, and other special techniques. 2 hrs. lecture, 3 hrs. laboratory/week.

**50.472 CELL PHYSIOLOGY ..... 3 sem. hrs.**

Application of physical and chemical principles of cellular processes; biochemistry of cellular constituents; physiochemical environment; bioenergetics; intermediate metabolism.

*Prerequisites: 12 hours of Biology and Chemistry 52.211 or 52.231, or consent of instructor.*

**50.511 SYSTEMATIC ZOOLOGY ..... 3 sem. hrs.**

Principles of animal taxonomy; the use of taxonomic keys; the geographical distribution of animals, and the collection and preservation of animals for museum study. 2 hrs. lecture, 3 hrs. laboratory/week.

*Prerequisites: 12 hours of biology, including 50.210 or consent of instructor.*

**50.521 SYSTEMATIC BOTANY ..... 3 sem. hrs.**

Morphology, taxonomy, and geographical distribution of vascular plants.

*Prerequisites: 50.220 and 363 or consent of instructor.*

**50.531 DEVELOPMENTAL BIOLOGY ..... 3 sem. hrs.**

Study of progressive changes or transformations which occur during the existence of various plants and animals. Morphogenesis, differentiation, metabolism, and genetics control are considered. Experimental studies in the laboratory utilize living material obtained from local regions and living cells grown in the laboratory. In vivo and in vitro study of growth, differentiation and morphogenesis also included. 2 hrs. lecture, 2 hrs. laboratory/week.

**50.532 BIOCHEMICAL GENETICS ..... 3 sem. hrs.**

The study of macromolecular complexes, protein synthesis and the regulation of cellular activity.

*Prerequisite: 50.332 or consent of instructor.*

**50.551 CONSERVATION OF BIOLOGICAL RESOURCES ..... 3 sem. hrs.**

Emphasis is on the theory and practice of environmental conservation of biological resources and on applied ecology. Field trips will be made to observe practices of wildlife, forest, and soil conservation.

**50.552 LIMNOLOGY ..... 3 sem. hrs.**

Chemical and physical aspects of lakes, ponds, and streams, and of the nature of their biota. Laboratory and field investigations will be included. 2 hrs. lecture, 3 hrs. laboratory/week.

**50.553 ANIMAL ECOLOGY ..... 3 sem. hrs.**

Animal environmental relationships considered at the levels of individuals, species, populations, the distribution and the role of animals in communities and ecosystems. Emphasis placed on population ecology. Laboratory and field studies include investigation of physical and biotic aspects of the environment. 2 hrs. lecture, 3 hrs. laboratory/week.

**50.554 PLANT ECOLOGY ..... 3 sem. hrs.**

Study of interrelationships among plants and their environments. Physical and biological factors plus human influences involved in the distribution, associations, and successions of plant populations and communities are investigated. 2 hrs. lecture, 3 hrs. laboratory/week.

**50.555 (461) PARASITOLOGY ..... 3 sem. hrs.**

Structure, taxonomy, and life history of animal parasites with emphasis on those affecting man. 2 hrs. lecture, 3 hrs. laboratory/week.

*Prerequisite: 50.210.*

**50.556 BIOLOGY OF THE ARTHROPODS ..... 3 sem. hrs.**

Study of arthropods including morphology, physiology, and embryology. In-depth study of the insect as representative of this phylum. Laboratory provides opportunity for dissection, preservation of tissues and experimentation. 2 hrs. lecture, 3 hrs. laboratory/week.

*Prerequisite: 50.311.*

**50.557 (457) ENTOMOLOGY ..... 3 sem. hrs.**

Study of the anatomical features of insects which enable the student to properly classify insects as to order, family, genera, and species. A technique course providing the student opportunity to collect, mount, and properly display insects for study. 3 month collecting period, May to August, and 3-week lab. for study of gross morphology and identification. 2 hrs. lecture, 3 hrs. laboratory per week.

*Prerequisite: 50.210 or consent of the instructor.*

**50.558 ICHTHYOLOGY ..... 3 sem. hrs.**

Field and laboratory studies of the fishes of the area including their collection, taxonomy, anatomy, behavior, and ecological methods. 2 hrs. lecture, 3 hrs. laboratory.

*Prerequisite: 50.312 or 50.361 or consent of instructor.*

**50.559 HERPETOLOGY ..... 3 sem. hrs.**

Amphibians and reptiles: structure, evolutionary history, speciation, geographic distribution, behavior. The laboratory is based on local faunas and on specimens available from local institutions. Techniques useful in collection, preserving, and identifying specimens. 2 hrs. lecture, 3 hrs. laboratory/week.

*Prerequisite: 50.312 or 50.361 or consent of instructor.*

**50.561 VERTEBRATE MORPHOLOGY ..... 3 sem. hrs.**

A study of vertebrate morphology, including paleontological, systematic, morphogenetic, and phylogenetic aspects. Laboratory work is expected to embrace morphological and functional study of preserved and living specimens. 2 hrs. lecture, 3 hrs. laboratory/week.

*Prerequisite: 6 semester hours of zoology or equivalent including 50.361 or 312 or consent of instructor.*

**50.571 ENDOCRINOLOGY ..... 3 sem. hrs.**

The role of the endocrine glands in growth, metabolism, development, regulation, and reproduction of animals. Integrated activities of the nervous and endocrine systems are studied.

*Prerequisites: 50.573 and a course in organic chemistry or consent of instructor.*

**50.572 COMPARATIVE ANIMAL PHYSIOLOGY ..... 3 sem. hrs.**

A comparison of the general physiology of different groups of animals. 2 hrs. lecture, 3 hrs. laboratory/week.

*Prerequisites: 50.573 and a course in organic chemistry or consent of instructor.*

**50.573 (471) PHYSIOLOGICAL CHEMISTRY ..... 3 sem. hrs.**

A study of life processes emphasizing chemistry and its relationship to the functional aspects of tissues and systems. Biologically important compounds and their effects on function. 2 hrs. lecture, 3 hrs. laboratory/week.

**50.591 DIRECTED STUDY IN BIOLOGY ..... 3 sem. hrs.**

An opportunity to carry on an independent investigation in an area of biology in which the student has a particular interest. Such investigation is under the direction of a member of the Department of Biology. The student is encouraged to identify a problem, employ an experimental design, and analyze data collected therefrom. Study of pertinent literature is a requirement of the course.

**50.592 MASTER OF EDUCATION THESIS ..... 3 or 6 sem. hrs.**

Independent research and the preparation of a formal thesis in partial fulfillment of the requirements for the degree of Master of Education in biology.

**50.593 MASTER OF SCIENCE THESIS ..... 6 sem. hrs.**

## CHEMISTRY

(Code 52)

### Specialization in Chemistry for the Master of Education Degree

**Purpose:** To expand and solidify the student's basic knowledge in Chemistry; to provide the opportunity for him/her to become familiar with the newly developed programs for Secondary Schools; and to acquaint him/her with the literature of the field and increase his/her ability to use it effectively in research and self-education.

**Prerequisites:** Entering students are expected to have had an undergraduate teaching major in Chemistry or its equivalent.

**Requirements:** At least 18 semester hours in Chemistry courses normally including Organic, Inorganic, Analytical and Physical Chemistry. (For complete requirements see Section 2.22).

**52.511 PRINCIPLES OF PHYSICAL CHEMISTRY I ..... 3 sem. hrs.**

A review of the theoretical principles of Chemistry. Gases, kinetic theory, thermodynamics, and equilibrium.

**52.512 PRINCIPLES OF PHYSICAL CHEMISTRY II ..... 3 sem. hrs.**

A continuation of 52.511. Solutions, electrolytes, conductance, electromotive force, and reaction kinetics.

*Prerequisite: 52.511 or equivalent.*

**52.520 MODERN ORGANIC CHEMISTRY  
FOR TEACHERS ..... 3 sem. hrs.**

An introduction to modern organic theory with emphasis on molecular structure, stereochemistry, and functional reaction type mechanism including substitution, addition, elimination, oxidation, and reduction. A knowledge of functional group organic chemistry is presumed.

**52.521 SELECTED TOPICS IN  
INORGANIC CHEMISTRY ..... 3 sem. hrs.**

A study of some of the important concepts of Inorganic Chemistry. Typical topics include nuclear, ionic, molecular, and crystal structure; bonding energies; acids and bases; mechanisms and reactions in non-aqueous media; and coordination chemistry. Other topics may be assigned for literature review and class presentation.

**52.522 QUALITATIVE ORGANIC ANALYSIS ..... 3 sem. hrs.**

A laboratory-oriented course in the separation and identification of organic compounds including the use of modern instrumental methods. One lecture per week on methods, six hours of lab per week.

*Prerequisite: 52.520 or equivalent.*

**52.524 SELECTED TOPICS IN ANALYTICAL  
CHEMISTRY ..... 3 sem. hrs.**

A review of classical Quantitative Analysis and an introduction to modern techniques with emphasis on separation methods such as chromatography, ion exchange, and distillation; and on the detection and determination of elements and compounds by techniques of spectroscopy, potentiometry, colorimetry, and others.

**52.541 INTRODUCTION TO  
MODERN BIOCHEMISTRY ..... 3 sem. hrs.**

A study of the chemical nature of proteins, lipids, carbohydrates, enzyme action, and metabolism. Physical Chemistry is a prerequisite.

**52.543 SELECTED TOPICS IN  
PHYSICAL CHEMISTRY ..... 3 sem. hrs.**

Topics other than those derived from thermodynamics. Will include such subjects as crystal structure, colloids, photochemistry, nuclear chemistry, molecular structure and properties, atomic structure and simple valence theory.

*Prerequisites: 52.511 and 512, or equivalent.*

**52.551 CHEMISTRY LABORATORY ..... 1 sem. hr.**

**52.552 CHEMISTRY LABORATORY ..... 1 sem. hr.**

**52.553 A, B, C, CHEMISTRY LABORATORY ..... 1 sem. hr. ea.**

Designed to accompany certain Chemistry lecture courses as needed.

**52.560 RECENT DEVELOPMENTS IN  
HIGH SCHOOL CHEMISTRY ..... 3 sem. hrs.**

This course will concern itself primarily with the CHEM Study



Course, and, to a lesser extent, the CBA course now being widely introduced into the high schools. The philosophy, and methods of teaching them, will be discussed, but the emphasis will be on content including the laboratory work.

**52.570 DIRECTED STUDY .....1 to 3 sem. hrs.**

Designed to benefit a student who can pursue a subject in Advanced Chemistry on his own time with only limited direction from a faculty member. The subject to be studied may be from any branch of Chemistry but must be one in which the Department is willing to assume the supervision. Approval of the Department Chairman required.

**52.592 MASTER'S PAPER ..... 3 sem. hrs.**

An extended paper showing a high degree of mastery of a chemical topic of instructional value to the student. Laboratory work may or may not be included depending on the nature of the topic. Approval of Research Adviser is required.

**52.599 CHEMICAL RESEARCH .....3 to 6 sem. hrs.**

Experimental work leading to the solution of a problem in Chemistry and which constitutes new knowledge in the field. The number of credits assigned depends on the complexity and magnitude of the project. Consent of the Research Adviser and Department Chairman required.

## MATHEMATICS

(Code 53)

**53.502 MODERN MATHEMATICS FOR THE  
ELEMENTARY SCHOOL ..... 3 sem. hrs.**

The development in children of mathematical concepts; recent research in the area.

**53.531 TOPICS IN GEOMETRY FOR THE  
SECONDARY SCHOOL ..... 3 sem. hrs.**

A complete review of the concepts of secondary school geometry stressing new ways to look at these concepts. Use of modern postulational foundations to point out the logical shortcomings of Euclid's "Elements" leading to non-Euclidean ideas and applications. Study of the projective plane, transformation theory, dissection theory, and Euclidean constructions.

**53.541 MATHEMATICAL STATISTICS ..... 3 sem. hrs.**

An introduction to mathematical statistics. Includes classical statistical theory, probability theory, discrete and continuous sample spaces, and statistical distributions.

**53.572 MATHEMATICAL OPTIMIZATION ..... 3 sem. hrs.**

A computer-oriented introduction to mathematical modeling and its application to social, life, and management sciences. Includes linear programming and game theory.

# PHYSICS

(Code 54)

## Specialization in Physics for the Master of Education Degree

**Purpose:** To expand and solidify the student's basic knowledge in Physics; to provide opportunity to become familiar with the newly developed programs for Secondary Schools; and to acquaint him/her with the literature of his/her field and increase his/her ability to use it effectively in research and in self-education.

**Prerequisites:** An undergraduate teaching major in Physics or its equivalent.

**Requirements:** 1) At least 18 semester hours in Physics courses normally including the areas of Mechanics, Electricity and Magnetism, and Modern Physics.

2) A Research Option consisting of either the preparation of a Thesis as in (a) below, or the preparation of a Master's Paper as in (b) below.

a) 65.599 Master's Reserach Paper on some aspect of science education, or 54.599 Physics Research.

b) 54.592 Master's Paper in Physics.

**Elective:** Additional credit in Education, Chemistry, and/or Physics, or (with approval of the Program Adviser) in related areas such as Mathematics or Earth & Space Science to provide a total of at least 30 semester hours.

### 54.501 MATHEMATICS FOR TEACHERS OF PHYSICAL SCIENCE ..... 3 sem. hrs.

Basic mathematical techniques of physics and chemistry with applications appropriate to teachers of the physical sciences. Methods of trigonometry, calculus, and vectors at a level to follow first-year college mathematics.

### 54.510 ELEMENTS OF CLASSICAL MECHANICS AND WAVES ..... 3 sem. hrs.

A review and extension of basic concepts and methods in the mechanics of particles and objects, wave motion, and kinetic theory.

### 54.511 ELEMENTS OF CLASSICAL ELECTRICITY AND OPTICS ..... 3 sem. hrs.

A review and extension of basic concepts and methods in electricity and magnetism and optics.

### 54.512 ELEMENTS OF MODERN ATOMIC AND NUCLEAR PHYSICS ..... 3 sem. hrs.

A review and application of the modern concepts of relativity, quanta, radiation, and wave mechanics to atomic and nuclear physics.

### 54.520 APPLIED ELECTRONICS ..... 3 sem. hrs.

The construction and characteristics of electronic devices such as amplifiers, oscilloscopes, meters, and transducers and their use in the acquisition, processing, and display of scientific data. Theory integrated with laboratory experience.

**54.530 MODERN ADVANCED LABORATORY ..... 3 sem. hrs.**

Laboratory work with modern instrumentation of intermediate sophistication in a variety of areas such as nuclear radiation, magnetic field effects, vacuum, mass spectroscopy, nuclear magnetic resonance, lasers, and interferometry.

**54.540 CURRENT APPLICATIONS OF  
MODERN PHYSICS ..... 3 sem. hrs.**

Application of principles and methods of modern physics to selected current topics of significance and probable classroom interest. Examples: lasers and holography, nuclear energy, cosmology, and solid state semiconductors.

**54.550 MATHEMATICAL METHODS OF  
THEORETICAL PHYSICS ..... 3 sem. hrs.**

Development and use of mathematical concepts and techniques appropriate to further study in graduate level physics. Vector calculus, differential equations, complex variables, special functions, Fourier analysis, etc.

**54.552 THEORETICAL PHYSICS FOR TEACHERS ..... 3 sem. hrs.**

Development of more sophisticated theoretical aspects of such basic areas of physics as electromagnetic radiation, mechanics, particles and waves, quantum mechanics, fields, etc.

*Prerequisite: 54.550 or equivalent.*

**54.560 RECENT DEVELOPMENTS IN  
HIGH SCHOOL PHYSICS ..... 3 sem. hrs.**

A consideration of modern programs including PSSC Physics and Harvard Project Physics, covering course content, laboratory work, philosophy, and method of teaching.

**54.561 RECENT DEVELOPMENTS IN  
JUNIOR HIGH SCIENCE ..... 3 sem. hrs.**

A consideration of modern programs including ISCS and IPS, covering course content, laboratory work, philosophy, and method of teaching.

**54.570 INDEPENDENT STUDY .....1 to 3 sem. hrs.**

Individual investigations (laboratory or theoretical) of a proposed area of special interest following a plan consistent with the resources of the Department and approved by a supervising professor.

**54.580 HISTORY AND PHILOSOPHY OF  
PHYSICAL SCIENCE ..... 3 sem. hrs.**

The historical development of the physical sciences and the nature of scientific thought and method will be studied to provide insight and understanding of both the characteristics of science and its significance and relevance to human progress.

**54.592 MASTER'S PAPER IN PHYSICS ..... 3 sem. hrs.**

An extended paper showing mastery of a topic or area in physics of instructional value to the student. Some laboratory work may be included.

**54.599 PHYSICS RESEARCH .....3 to 6 sem. hrs.**

Experimental and/or theoretical research which leads the student to new knowledge and the solution of a problem in physics. The number of credits assigned depends upon the complexity and magnitude of the project.

## PHYSICAL SCIENCE

### Specialization in Physical Science for the Master of Education Degree

**Purpose:** To expand and solidify the student's basic knowledge in a combination of Physics, Chemistry, and related areas; to provide opportunity to become familiar with the newly developed programs for Secondary Schools; and to acquaint him/her with the literature in the field and increase the ability to use it effectively in research, instruction, and self-education.

**Prerequisites:** An undergraduate science emphasis which included at least one year each of Chemistry, Physics and Mathematics.

**Requirements:** 1) At least 18 semester hours in Chemistry and Physics courses with no less than 6 semester hours in each field.

2) A Research Option consisting of either the preparation of a Thesis as in (a) below, or the preparation of a Master's Paper as in (b) below.

- a) 65.599 Master's Research Paper on some aspect of physical science education, or 52.599 Chemical Research, or 54.599 Physics Research.
- b) 52.592 Master's Paper in Chemistry or 54.592 Master's Paper in Physics.

**Elective:** Additional semester hours in Education, Chemistry, and/or Physics, or (with approval of the Program Adviser) in related areas such as Mathematics or Earth & Space Science to provide a total of at least 30 semester hours.

## MARINE SCIENCE

(Code 55)

Courses in Marine Science are available during summer months at the Marine Science Consortium at Lewes, Del., and Wallops Island, Va. For further information contact Mr. Laverne McClure, Director of the Marine Science Consortium, Bloomsburg State College.





# 4. SCHOOL OF PROFESSIONAL STUDIES

## 4.1 EDUCATION

### EDUCATIONAL STUDIES AND SERVICES

(Code 60)

**60.451 PUPIL PERSONNEL SERVICES  
IN THE PUBLIC SCHOOL..... 3 sem. hrs.**

A comprehensive view of pupil personnel services in elementary and secondary schools; school attendance, school health programs, pupil transportation, psychological services, guidance services.

**60.501 MAJOR PHILOSOPHIES OF EDUCATION ..... 3 sem. hrs.**

Modern educational problems and trends interpreted in the light of philosophical viewpoints; study of primary sources of concepts and philosophies which have influenced and are influencing education.

**60.502 SCHOOL AND SOCIETY ..... 3 sem. hrs.**

Effects on the school program of social class, family and community pressures and changing patterns and standards of life in our society. The course aims to foster understanding of these pressures and patterns so as to enable the teacher to work effectively in encouraging the good and reducing the harmful impacts of social forces in relationships of children.

**60.503 HISTORY OF AMERICAN  
EDUCATIONAL THEORY ..... 3 sem. hrs.**

Historical foundations of American educational theory with emphasis on individuals and schools of thought which have influenced and are influencing education in America.

**60.505 COMPARATIVE EDUCATION ..... 3 sem. hrs.**

Educational ideas and practices of various countries of the world are examined for their impact upon our culture and education. Particular attention is given to the relationship of European educational programs to the American philosophy and practice of public education.

**60.511 RECENT TRENDS IN  
CURRICULUM DEVELOPMENT ..... 3 sem. hrs.**

Curriculum developments, K-12, which grow out of the changing role of education in American society.

**60.512 SELECTION AND USE OF AUDIO-VISUAL MATERIALS IN EDUCATION ..... 3 sem. hrs.**

Advanced study of strengths and weaknesses of educational media; design of learning situations which incorporate techniques of instructional technology.

**60.520 GUIDANCE AND COUNSELING FOR EXCEPTIONAL CHILDREN ..... 3 sem. hrs.**

A study of the needs of exceptional children in the public schools (including the academically talented); guidance and counseling techniques for teachers and guidance counselors in meeting those needs; guidance and counseling for exceptional children related to the total guidance counseling program.

**60.530 GUIDANCE IN THE ELEMENTARY SCHOOL ..... 3 sem. hrs.**

Concepts and techniques of the guidance process in the elementary school; behavioral and developmental problems; releasing creative capacities of children.

**60.533 MEASUREMENT AND EVALUATION IN THE ELEMENTARY SCHOOL ..... 3 sem. hrs.**

Construction, administration, and interpretation of group tests of intelligence, achievement, aptitude, and personality in elementary schools.

**60.550 PROBLEMS IN GUIDANCE AND COUNSELING ..... 3 sem. hrs.**

Philosophy of guidance; history of the guidance movement; guidance needs of children and adolescents; methods of gathering data; nature of school records; interpretation of test results and inventories; use of occupational information and data; interviewing and counseling techniques.

**60.551 TECHNIQUES IN COUNSELING ..... 3 sem. hrs.**

Theories, principles and practices of counseling; development and use of counseling materials such as test results, educational information and other pertinent materials.

**60.552 ORGANIZATION AND SUPERVISION OF GUIDANCE ..... 3 sem. hrs.**

Types of guidance organizations used in schools and their effectiveness in providing for good guidance.

**60.561 MEASUREMENT AND EVALUATION IN THE SECONDARY SCHOOL ..... 3 sem. hrs.**

Construction, administration, and interpretation of group tests of intelligence, achievement, aptitude, and personality in secondary schools.

**60.581 INDEPENDENT STUDY IN EDUCATION ..... 1-6 sem. hrs.**

Designed for teachers in public schools as an opportunity to pursue in-service projects in cooperation with a faculty adviser. The teacher submits a "learning contract" to an adviser designated by the department chairman. The contract details the academic goals and includes a description of the project in its relation to the goals, a reading list, the proposed credit,

and a description of a proposal for a final report. Permission to register for the course is granted upon approval of the contract. Evaluation is based on the written report and an examination by a committee appointed by the adviser and/or department chairman. Students may register at any suitable time; the duration of the experience is flexible.

**60.583 SEMINAR IN EDUCATION ..... 1-6 sem. hrs.**

Designed to provide opportunity for a group of teachers engaged in a common in-service project to use the resources of the College and its faculty in connection with the project. A "learning contract" similar to that of 60.581 is submitted by the group as a basis for permission to register. Papers related to aspects of the project and to the literature designated in the contract are presented by the members for discussion and criticism in seminar meetings held under direction of a faculty member. Evaluation is based upon the seminar reports and a final comprehensive written report by the student.

**60.591 FOUNDATIONS OF  
EDUCATIONAL RESEARCH ..... 3 sem. hrs.**

Methods and techniques used in educational research; interpretation of statistical data. Application to professional problems.

## ELEMENTARY EDUCATION

### Specialization in Elementary Education for the Master of Education Degree

**Purpose:** This program is intended to enhance the professional competence of the individual as a teacher and leader through integrated learning experiences in study of the child, the curriculum, current practice, and the teacher's academic field.

**Prerequisite:** Instructor Level I certification for teaching in the elementary school.

**Required:** Education 60.501, 591; Master's Research Paper or a departmental paper in Elementary Education; Six to twelve semester hours in courses pertinent to a professional specialization or in an academic discipline. (The general degree requirements are stated in Section 2.22.)

**Elective:** Elective courses may be chosen from 60.502, 60.503, 60.505, 60.512, 60.530, 60.533, 60.551, 60.552, courses in category 62 for which the student has prerequisites, courses in category 63, Psychology 48.511.

**Examination:** A comprehensive written or oral examination.

## COURSES

(Code 62)

**62.506 URBAN EDUCATION FOR THE  
DISADVANTAGED ..... 3 sem. hrs.**

Designed to increase awareness of problems of the urban educational

system. The course emphasizes a growth of sensitivity to the disadvantaged youngster, in-depth examination of current research findings in each area studied, teaching strategies and resources, and approaches to resolve major problems. Discussion of polarization on critical problem areas.

**62.514 HOME, SCHOOL, AND COMMUNITY RELATIONS ..... 3 sem. hrs.**

An introductory course in public relations, with special reference to elementary school, in which a philosophy of partnership between home, school and community is developed and principles, attitudes and techniques to encourage community sharing in the planning of and assuming responsibility for good schools are considered.

**62.521 ELEMENTARY SCHOOL CURRICULUM ..... 3 sem. hrs.**

Problems related to development, experimentation, and improvement of curriculum practices in the elementary school.

**62.522 CURRICULUM TRENDS IN EARLY CHILDHOOD EDUCATION ..... 3 sem. hrs.**

Changing goals and the developing programs required to meet the needs of children who enter school with increased experiential background.

**62.523 PRACTICES IN TEACHING THE YOUNG CHILD ..... 3 sem. hrs.**

Emphasis is placed on developmental aspects of childhood as they relate to the school program.

**62.524 KNOWLEDGE AND THE CURRICULUM IN THE ELEMENTARY SCHOOL ..... 3 sem. hrs.**

The place of knowledge in developing a curriculum. The emphasis is on content as it is influenced by innovative practices.

**62.525 CURRENT PRACTICES IN ELEMENTARY SCHOOL SCIENCE ..... 3 sem. hrs.**

Problems resulting from the increased interest of children in science and the need for science instruction in the elementary grades; methods and materials for nurturing these interests and for implementing science instruction within the limits of the interests of children are presented and evaluated.

**62.526 FOREIGN LANGUAGE IN THE ELEMENTARY SCHOOL ..... 3 sem. hrs.**

Problems involved in the teaching of foreign languages in the elementary school; teaching materials; techniques in teaching of a foreign language at the elementary school level; observation of elementary school foreign language classes.

**62.527 SOCIAL STUDIES IN THE ELEMENTARY SCHOOL ..... 3 sem. hrs.**

Contemporary trends and current research in the disciplines of the social sciences as a basis for development of a conceptual framework for a social studies program.

**62.528 LANGUAGE ARTS IN THE MODERN SCHOOL ..... 3 sem. hrs.**

Problems related to instruction in various aspects of the language arts; the place of the language arts in the curriculum; current research and its practical application.

**62.529 LITERATURE FOR CHILDREN IN THE ELEMENTARY GRADES ..... 3 sem. hrs.**

Survey of ways that children may encounter literature and methods that are effective in the encounter. Students become acquainted with children's books, work with children in a story-telling experience, discover ways other than through reading by which children may experience literature.

**62.534 CREATIVE TEACHING IN ELEMENTARY EDUCATION ..... 3 sem. hrs.**

Intended to help teachers to become more creative in their approaches to their students and subject matter. Emphasis is on understanding creative process, recognizing the creative child, and development of the creative potential of student and teacher.

**62.539 SEMINAR IN ELEMENTARY EDUCATION ..... 3 sem. hrs.**

An investigation of current thinking and research in aspects of elementary education.

**62.564 FIELD EXPERIENCE IN GEOGRAPHY AND EARTH SCIENCE ..... 3 sem. hrs.**

An introduction to the geology and geography of Pennsylvania with special emphasis upon field recognition and interpretation. Extensive field trips, laboratory exercises, collecting, and classifying are stressed.

**62.565 FIELD EXPERIENCE IN BIOLOGY ..... 3 sem. hrs.**

A field-oriented course designed to familiarize the elementary teacher with the name, habitat and interrelationship of the major groups of plants and animals of the region.

**62.581 INDEPENDENT STUDY IN ELEMENTARY EDUCATION ..... 1-6 sem. hrs.**

Comparable to 60.581.

**62.583 SEMINAR IN ELEMENTARY EDUCATION ..... 1-6 sem. hrs.**

Comparable to 60.583.

**62.590 CURRENT RESEARCH AND DEVELOPMENT IN EARLY CHILDHOOD EDUCATION ..... 3 sem. hrs.**

Recent literature and experimental work in the field of early childhood education, pre-school, kindergarten, primary. Characteristics of the learner, learning environment, learning materials, and innovative programs.



**62.599 MASTER'S RESEARCH PAPER ..... 3 sem. hrs.**

Student demonstrates ability to employ accepted methods of educational research in the solution or intensive study of some problem area of interest or concern to him. The problem area selected for the research project must be related to the curriculum which the student is pursuing.

## READING

### Specialization in Reading for the Master of Education Degree

(Requirements for Certification in Reading can be obtained from Dr. Margaret Sponseller.)

**Purpose:** This program is intended to prepare experienced teachers to become reading supervisors or specialists, through learning experiences in diagnostic and remedial techniques, insights in psychology of learning, means of stimulating enjoyment of reading, training in supervision procedures, and clinical practice.

**Prerequisites:** Level I teacher certification; a basic course in teaching of reading.

**Required:** Departmental Paper.

**Elective:** Courses may be elected from other disciplines than Reading (63) with selection of these electives dependent upon the needs and educational backgrounds of the student.

**Examination:** A comprehensive written and/or oral examination is a graduation requirement in this program.

## COURSES

(Code 63)

**63.540 PROBLEMS IN THE TEACHING OF READING ..... 3 sem. hrs.**

Trends in reading instruction; development of competence in the use of different approaches to the solution of reading problems.

**63.541 IDENTIFICATION AND DIAGNOSIS OF  
REMEDIAL READING DISABILITIES ..... 3 sem. hrs.**

Diagnostic and remedial procedures emphasizing both standardized and informal techniques; analysis of extreme reading disabilities; preparation of case studies; special classes for corrective and remedial procedures; experience with children in laboratory situation.

**63.542 PSYCHOLOGICAL ASPECTS OF READING ..... 3 sem. hrs.**

Psychological foundations of learning theories; their relationship to reading; their subsequent effect on reading achievement.

**63.543 READING CLINIC I ..... 3 sem. hrs.**

Clinical experience in the diagnosis and remediation of reading and/or learning disabilities: diagnosis, development, administration, and evaluation of individual programs; case studies.

*Prerequisites: 6 hours selected from 63.541; 63.548; 63.542 and consent of director.*

**63.544 READING CLINIC II ..... 3 sem. hrs.**

Clinical experience in the development of reading skills and comprehension with persons who may or may not have remedial and/or learning disabilities. Combined with 63.543 gives experience with all levels.

*Prerequisites: 6 hours selected from 63.541, 63.542, 63.548 and consent of director.*

**63.545 ORGANIZATION AND ADMINISTRATION  
OF READING PROBLEMS ..... 3 sem. hrs.**

A course for the reading teacher and administrator who will be involved with supervising and programming responsibilities. Types of Federal and/or School reading programs; a summary of the requirements of E.S.E.A. Titles.

**63.546 READINGS IN THE CONTENT AREAS ..... 3 sem. hrs.**

Designed for teachers in grades 4 to 8. Procedures and materials in word perception, special reading skills, vocabulary developments, dictionary skills, and library techniques.

**63.547 SEMINAR IN READING ..... 3 sem. hrs.**

Independent work in the study of recent research in the field of reading as it is applied to the departmental paper. New curriculums, materials, and procedures of teaching reading.

**63.548 DIAGNOSIS AND TREATMENT OF LEARNING  
DISABILITIES IN RELATION TO READING ..... 3 sem. hrs.**

This course is designed for the Reading Specialist and/or Reading Supervisor. Language disorders as a factor in learning. Perceptual abilities, i.e., auditory and visual modalities for learning disabilities. Recent research in the area of learning disabilities.

**65.530 MIDDLE SCHOOLS—CURRICULUM DEVELOPMENT  
AND INSTRUCTIONAL STRATEGIES ..... 3 sem. hrs.**

Inquiry into the role of early secondary education by analyzing historical trends, curricular patterns, instructional designs, and personnel structure of this organizational unit. Emphasis on teacher behavior, student values and attitudes, and instructional designs peculiar to the junior high, middle, and intermediate schools.

**65.541 THE DEPARTMENT CHAIRPERSON:  
A WORKSHOP ..... 1-3 sem. hrs.**

The workshop gives department chairpersons and those aspiring to be department chairpersons an opportunity to investigate options of methods, strategies and materials in the role. Emphasis placed on human relations, organization, supervision, curriculum, and curriculum revision.

**65.560 DEVELOPMENT OF THE  
SECONDARY SCHOOL CURRICULUM ..... 3 sem. hrs.**

Problems related to development, experimentation, and improvement of curriculum practices in the secondary school.

**65.564 FIELD EXPERIENCES IN  
GEOGRAPHY AND EARTH SCIENCE ..... 3 sem. hrs.**

An introduction to the geology and geography of Pennsylvania with special emphasis upon field recognition and interpretation. Field trips, laboratory exercises, collecting, and classification.

**65.566 LABORATORY TEACHING METHODS  
IN BIOLOGY ..... 3 sem. hrs.**

Experience in development and use of laboratory exercises, particularly those involving experiments and the inquiry of investigative approach. Instruction and experience in technical methods useful in teaching secondary biology.

*Prerequisite: 12 semester hours in biology.*

**65.567 BSCS METHODS AND PHILOSOPHY ..... 3 sem. hrs.**

Study of the rationale and methods of instruction in the BSCS biology program; consideration given to invitations to inquiry, specialized laboratory procedures, test question construction, the laboratory block program, the S-M (slow materials) program, the second level program, and student and teacher aids and materials of the BSCS program. Selected BSCS laboratories are conducted.

**65.568 PROBLEMS OF TEACHING  
FOREIGN LANGUAGES ..... 3 sem. hrs.**

Problems involved in the teaching of foreign languages in the modern school. Examination of research concerning the teaching of foreign languages; techniques of using the language laboratory and other commercial materials available in the field.

**65.571 METHODS OF APPRAISING  
TEACHING STRATEGIES ..... 3 sem. hrs.**

Improvement of instruction through self analysis. Micro-teaching techniques; planning dimensions; self appraisal techniques. Designed for teachers, with special reference to the work of cooperating teachers.

**65.576 SEMINAR ON LEGAL IMPLICATIONS  
AND BUDGET PREPARATION ..... 3 sem. hrs.**

Consideration is given to the limitations established by local, state, and federal law related to the interactions of school personnel. Special attention to recent changes resulting from judicial decisions. Fiscal control of education with emphasis on local budgetary problems is a major objective.

**65.577 EDUCATIONAL RESEARCH FOR  
SUPERVISION ..... 3 sem. hrs.**

Consideration is given to the development of ability to read and interpret educational research and apply it to a school situation. Conclusions concerning curriculum content and teaching strategies designed for the improvement of the educational process are emphasized.  
*Prerequisites: 60.591 or 60.533 or 60.561 or 48.462.*

**65.578 GROUP PROCESSES IN SUPERVISION ..... 3 sem. hrs.**

Emphasis is given to group processes, communication in the group and organizational goals related to educational supervision. The focus is on knowledge of and practice in laboratory experiences in group processes and applicability to supervision. These experiences are intended to provide opportunities for experimenting with and evaluating leadership skills and provide a means of promoting creativity and initiative.

**65.579 SEMINAR IN SUPERVISION I ..... 3 sem. hrs.**

Through an examination of the objectives, techniques, and materials of staff supervision, this course defines the supervisory function directed toward the improvement of instruction. Emphasis is placed upon the interrelationships between the humanistic aspects of education and democratic administrative behavior. Roles of contemporary supervision with respect to educational quality assessment, inter-personal relations, and the catalytic role of the supervisor are studied.

**65.581 INDEPENDENT STUDY IN  
SECONDARY EDUCATION ..... 1-6 sem. hrs.**

See 60.581.

**65.583 SEMINAR IN SECONDARY EDUCATION ..... 1-6 sem. hrs.**

See 60.583.

**65.599 MASTER'S RESEARCH PAPER ..... 3 sem. hrs.**

Student demonstrates the ability to employ accepted methods of educational research in the solution or intensive study of some problem area of interest or concern to him/her. The problem area selected for the research project must be related to the curriculum which the student is pursuing.





## 4.2 SPECIAL EDUCATION

(Code 70)

### Specialization in Special Education for the Master of Education Degree

**Purpose:** The program is intended to improve the competence of the teacher of the exceptional children, to develop potential for leadership, and to prepare for further graduate study in the field.

**Prerequisite:** Applicants must hold, or be eligible for, a current Pennsylvania teaching certificate for Special Education—Level I.

**Program Options:** Applicants may elect preparation for teaching the mentally retarded or for teaching the brain injured (learning disabilities).

**Required Courses:** Mental Retardation: 70.501, 70.502, 70.544 and 70.599—Master's Research Paper or Departmental Paper.

Brain Injured (Learning Disabilities): 70.544, 70.560, 70.590, 70.599—Master's Research Paper or Departmental Paper.

**Elective:** Courses from 70.400 and 70.500 categories or appropriate courses from other departments as approved by the adviser.

#### **70.432 LANGUAGE ARTS FOR SPECIAL CLASSES ..... 3 sem. hrs.**

A student-centered workshop approach in analysis of methods, research and philosophies currently in use in the teaching of the language arts to special classes. Practice in the use of various teaching aids and machines related to student projects in language arts applicable to individual needs of children in special classes.

#### **70.450 BEHAVIOR DISORDERS ..... 3 sem. hrs.**

Psychological development of behavior and its effect on the child's school performance. The effect of the school on the child; intervention approaches in educating emotionally disturbed children.

#### **70.455 LEARNING DISABILITIES ..... 3 sem. hrs.**

A study of the characteristics and symptoms of specific learning disorders. Students are introduced to diagnostic and educational procedures used with learning disorders. Emphasis is on perceptual and conceptual factors in the development of language skills.

#### **70.490 SPECIAL WORKSHOP ..... 1-6 sem. hrs.**

Temporary Special Workshop seminars designed to focus on contemporary trends, topics, and problems in the field of Special Education. Lectures, resource speakers, team teaching, field experience and practicum, new media and related techniques. Usually are funded projects.

#### **70.491 SPECIAL WORKSHOP ..... 1-6 sem. hrs.**

(Refer to description of 70.490.)

#### **70.492 SPECIAL WORKSHOP ..... 1-6 sem. hrs.**

(Refer to description of 70.490.)

**70.501 ADMINISTRATION AND SUPERVISION OF  
EDUCATION FOR EXCEPTIONAL CHILDREN ..... 3 sem. hrs.**

Application of fundamental principles of school administration and supervision to the areas of exceptionality and to problems unique to each. School law, teacher recruitment, in-service education, organization and integration of special education and ancillary services, evaluation of special provisions and finance as these bear on special education.

**70.502 MENTAL RETARDATION ..... 3 sem. hrs.**

Intensive review of research pertaining to etiology of mental retardation, classification systems, and of diagnosis. Included are a study of brain injury, familial retardation, research on learning characteristics, and evaluation of psychological tests. Criteria distinguishing mental retardation from other problems.

**70.515 CURRICULUM AND MATERIALS FOR THE  
EDUCABLE MENTALLY RETARDED ..... 3 sem. hrs.**

Problems-oriented course concerned with principles and procedures of curriculum and materials development and construction. Designed to further develop and/or refine the special education teacher's competence in developing adequate, meaningful curricular experiences for the retarded at various levels.

**70.516 PSYCHOLOGY OF EXCEPTIONAL CHILDREN ..... 3 sem. hrs.**

Symptomatology, personality formation and developmental and therapeutic consideration for the exceptional child.

**70.517 EDUCATION OF THE GIFTED CHILD ..... 3 sem. hrs.**

Principles and practices which are modifying school programs to conserve and develop to the optimum degree the capabilities of the more able children. A study is made of teaching techniques and devices used effectively in both the elementary and the secondary school.

**70.525 CURRICULUM AND METHODS FOR THE  
TRAINABLE MENTALLY RETARDED ..... 3 sem. hrs.**

Designed to give the student intensive study and understanding of the trainable mentally retarded child. Emphasis on curriculum development, methods, and materials to be used with the trainable mentally retarded child in the school. Research; methods of diagnosis and differentiation; implications for training and psychological planning.

**70.532 COMMUNICATION DISORDERS OF  
EXCEPTIONAL CHILDREN ..... 3 sem. hrs.**

Review of research and analysis of language and speech development in relation to intellectual development; cultural background and other influences; criteria and techniques for developing language and speech in the special class; role of the speech correctionist and others to teachers.

**70.544 DIAGNOSTIC AND REMEDIAL TECHNIQUES ..... 3 sem. hrs.**

Diagnostic and remedial techniques and instruments used with children in special education programs. Critical evaluation of applicability of

each to the child in relation to causes and conditions of exceptionality. Development of skills in interpreting and writing case histories and reports, in selection and application of remedial techniques, and evaluation of progress. *Prerequisite: A course in Tests and Measurements, or its equivalent.*

**70.552 SPECIAL PROJECT ..... 3 sem. hrs.**

Designed to further student's own interest and competency in an area of Special Education for the exceptional child. Library research or individual projects involving service to the mentally retarded may be assigned and conducted under supervision of a staff member.

**70.555 CLASSROOM MANAGEMENT ..... 3 sem. hrs.**

Designed to aid teachers and supervisors in planning classroom strategy, including grouping, scheduling, and behavioral techniques such as operant conditioning in the classroom. Areas of concern include establishing an optimum educational environment.

**70.559 SEMINAR IN EDUCATION OF  
EXCEPTIONAL CHILDREN ..... 3 sem. hrs.**

Research oriented and devoted in its entirety to *problems* in the education of exceptional children. The problems may be theoretical or practical. Consideration is given to those which are of individual interest to the student.

**70.560 NEUROLOGICALLY IMPAIRED CHILD ..... 3 sem. hrs.**

Terminology necessary to interpret diagnostic reports; classroom techniques for managing brain-injured children; preparation to work with children with specific learning disabilities which are related to neurological dysfunction and concomitant behavior.

**70.561 CHILD GROWTH AND DEVELOPMENT  
RESOURCE MATERIALS ..... 3 sem. hrs.**

Designed to guide the teacher in acquiring knowledge of the developmental processes and stages in the growth and development of children. Emphasis is placed on resources and on building a file of material that will acquaint the teacher with developmental stages and make available tests and scales that can be readily used in the classroom when needed.

**70.590 DIAGNOSTIC AND TEACHING PRACTICUM ..... 6 sem. hrs.**

Opportunity to work in a structured setting on a one-to-one and small group basis. Practicum is the culminating activity wherein the teacher will apply the knowledge previously acquired in academic courses through the interpretation of diagnostic reports, evaluating children's needs, planning and carrying out programs and making recommendations for the child's future educational program.

**70.599 MASTER'S RESEARCH PAPER ..... 3 or 6 sem. hrs.**

Opportunity to employ accepted methods of educational research in the solution or intensive study of some problem area of interest or concern. The problem area selected for the research project must be related to the mentally retarded.

## 4.3 COMMUNICATION DISORDERS

### Specialization in Communication Disorders for the Master of Education Degree

**Purposes:** The purposes of the graduate program in Communication Disorders are (1) to prepare clinicians in speech and language pathology and audiology for schools, hospitals and clinics and (2) to prepare teachers of the hearing impaired.

Students in Speech and Language Pathology and Audiology must satisfy the course and clinical training requirements for the Certificate of Clinical Competence of the American Speech and Hearing Association.

Students in Education of the Hearing Impaired may satisfy the requirements for certification by the Council on Education of the Deaf.

**Admission Requirements and Prerequisites:** Admission to full-time graduate study is subject to an annual quota, with selection made on the basis of undergraduate Quality Point Average and the following prerequisites for the areas of study: (1) For Speech and Language Pathology—an undergraduate major in this field or the make-up of deficiencies including clinical training and practicum, (2) for Education of the Hearing Impaired—an undergraduate curriculum which included teacher certification together with courses constituting the equivalent of a minor in Communications Disorders. Deficiencies must be made up without graduate credit.

**Required Courses:** Master's Research Paper or Department Paper; courses and practicum to fulfill requirements for the desired credentials selected subject to the approval of the adviser.

**Elective Courses:** Elective courses may be chosen with approval of the adviser from Categories 70, 71, 74, and 48.

### COURSES

(Code 74)

#### 74.452 ANATOMY OF SPEECH AND HEARING MECHANISMS ..... 3 sem. hrs.

Embryology, anatomy, neurology, and physiology of the larynx and ear are studied. The actual processes involved in human speaking and hearing are explored. A cooperative lecture series is developed for the students by the medical staff at Geisinger Medical Center.

*Prerequisite:* 74.351.

#### 74.467 PSYCHOLOGY OF SPEECH AND HEARING ..... 3 sem. hrs.

Applications of the psychology of learning to communicative behavior and clinical problems. Current educational and therapeutic trends and practices.

*Prerequisite:* 74.351.

#### 74.472 MEASUREMENT OF HEARING LOSS ..... 3 sem. hrs.

The anatomy and physiology of the hearing mechanisms are studied. Etiology of hearing losses, interpretation of audiometric evaluations and available rehabilitative procedures are discussed. Laboratory experience in the administration of clinical audiometric evaluations is provided.

*Prerequisites:* 74.276, 376.

**74.475 INTRODUCTION TO SPEECH SCIENCE ..... 3 sem. hrs.**

The physical properties of acoustic signals are considered as factors that affect the nature of production and subsequent reception of speech. Phonetic instrumentation is introduced in relation to the analysis and synthesis of speech. The application of principles of speech science to speech therapy and other areas is discussed.

*Prerequisites:* 74.152, 251, 252, 253, 276, 376.

**74.501 FOUNDATIONS OF SPEECH  
AND HEARING HABILITATION ..... 3 sem. hrs.**

Historical review and analyses are made concerning the evolution of the profession. Interdisciplinary aspects are examined. Organizational, administrative, and legal areas are evaluated as they relate to education and the profession.

**74.504 CURRENT SPEECH AND HEARING  
PRACTICES IN PUBLIC SCHOOLS ..... 3 sem. hrs.**

Present practices and philosophies in public school are examined. Merits of existing programs are considered. Educational structures and national, state, and local requirements are reviewed. Research trends and advanced practices in the field are considered. Includes analyses of equipment materials, record-keeping procedures, and related materials.

**74.505 SUPERVISION AND ADMINISTRATION OF  
SPEECH AND HEARING SERVICES ..... 3 sem. hrs.**

General principles of supervision are examined and professional personnel practices are explored.

**74.511 ORGANIC DISORDERS OF COMMUNICATION ..... 3 sem. hrs.**

Etiology, diagnosis, and treatment of organic factors are subjects of intensive study. Emphasis is focused on articulatory abnormalities of speech processes caused by cerebral palsy and cleft palate conditions. Implications of disorders for developmental age levels are considered.

**74.512 SEMINAR IN APHASIA AND ALLIED  
SYMBOLIZATION DISORDERS ..... 3 sem. hrs.**

Study is made of selected topics allied to aphasia and dysphasia related to developmental factors or sequel to injuries and disorders to the central nervous system.

**74.532 HEARING AIDS AND AUDITORY TRAINING ..... 3 sem. hrs.**

Theoretical and clinical analyses of literature are evaluated in relation to educational and other rehabilitative measures available to individuals with serious organic and non-organic hearing problems. Study, interpretation, and evaluation of modern instruments and tests are included.

**74.541 SEMINAR IN STUTTERING ..... 3 sem. hrs.**

Theoretical and clinical analyses of literature are evaluated in relation to educational and treatment measures available to individuals with fluency disorders. Study, interpretation and evaluation of modern testing instruments and clinical treatment procedures.



**74.553 SPEECH PATHOLOGY PRACTICUM ..... 3 sem. hrs.**

Special clinical problems of clients are considered through advanced study and experience. Externships may be arranged in approved institutions or schools. Problem areas and student practicums must be approved by graduate adviser.

**74.554 CLINICAL PRACTICUM IN AUDIOLOGY ..... 3 sem. hrs.**

Hearing losses and deafness affecting the personal and socio-economic adjustment of individuals are evaluated and treated through supervised study and experience. Externships may be arranged in approved private and public institutions.

**74.561 VOICE AND LANGUAGE DISORDERS .....3 sem. hrs.**

Differential diagnosis and therapeutic methods are evaluated for organic and functional disorders. Particular attention is given to vocal processes and pathologies associated with laryngectomies, vocal nodules and ulcers, vocal band paralysis, psychogenic disturbances, foreign dialects, dysarthrias, language deficiencies resulting from sensorineural hearing impairment, and problems associated with voice quality and nasality. Clinical tests and instrumentation are appraised.

**74.562 PROGRAMMED CONDITIONING  
FOR LANGUAGE ..... 3 sem. hrs.**

This course provides skill training in administration of programmed conditioning procedures in language to children and adults with language disabilities. The course includes research background and linguistic principles of the language curriculum as well as discussion of the applied technology of programmed conditioning.

**74.564 SPEECH FOR THE HEARING IMPAIRED ..... 3 sem. hrs.**

Study of the principles and techniques used in development and formation of the English speech sounds by the synthetic and analytic methods with special consideration given the production, classification and transmission of speech sounds by these methods. Supervised demonstrations and practicums are an integral part of the course.

**74.565 PROBLEMS AND TRENDS IN TEACHING  
THE HEARING IMPAIRED ..... 3 sem. hrs.**

Current practices and trends in education and welfare of the hearing impaired. Concerned with psychology, social adjustment, educational achievement, political and social viewpoints, learning problems and vocational competence of hearing impaired. New techniques and methodologies.

**74.566 LANGUAGE FOR THE HEARING IMPAIRED ..... 3 sem. hrs.**

Study of the principles and techniques used in the development and correction of language for the hearing impaired. The student is made familiar with leading systems of language designed for the hearing impaired and proficient in the step-by-step development of at least one language system. Supervised demonstrations and practicums are an integral part of the course.

**74.568 COMMUNICATION FOR THE HEARING IMPAIRED ..... 3 sem. hrs.**

Study of the expressive and receptive methods of communication used by the hearing impaired with emphasis on new techniques and methodologies.

**74.569 CURRICULAR SUBJECTS FOR THE HEARING IMPAIRED ..... 3 sem. hrs.**

Practices, content and methods of teaching school subjects to the hearing impaired are examined with emphasis on content and methods rather than theory.

**74.570 PRACTICUM WITH THE HEARING IMPAIRED ..... 6 sem. hrs.**

Hearing losses affecting the communicational, educational and vocational adjustment of individuals are evaluated through supervised observation, clinical practice and practicum experience. Students are assigned to approved private and public programs for the hearing impaired where they work with selected professionals in communication disorders, following the same schedules and assuming responsibilities similar to those of professionals. Arrangements relating to student interest must be approved by program adviser.

**74.571 SEMINAR IN SPEECH PATHOLOGY ..... 3 sem. hrs.**

Selected theoretical and clinical areas of speech pathology and related disciplines. Selected areas may include clinical and research topics pertaining to student needs.

**74.572 SEMINAR IN AUDIOLOGY: SPECIAL PROBLEMS ..... 3 sem. hrs.**

Analysis, interpretation, and study are made of selected problems in audiology and related disciplines that may include education, psychology, otology, rehabilitation, and other fields.

**74.573 SEMINAR IN AUDIOLOGY: INDUSTRIAL AND PUBLIC HEALTH AUDIOLOGY ..... 3 sem. hrs.**

Problems and programs of hearing conservation in public institutions and industries are examined with special emphasis on legislation and medico-legal questions. The role and function of the public health and industrial audiologist is examined.

**74.574 SEMINAR IN AUDIOLOGY: AUDITORY PROBLEMS IN CHILDREN ..... 3 sem. hrs.**

Congenital and acquired hearing impairment in children is examined with special emphasis on problems of differential diagnosis. Educational and social implication of hearing impairment in children is discussed in conjunction with appropriate habilitative procedures.

**74.575 SPEECH AND VOICE SCIENCE ..... 3 sem. hrs.**

Historical review, interpretation, and application of literature dealing with experimental and practical phonetics are emphasized. Advanced study of kinesiological phonetics and phonetic metamorphology is studied in relation to anatomical and physiological processes of the speaking act. Evalua-

tion also is made of diagnostic tests and instruments developed to measure physiological and other properties of speech and acoustics.

**74.576 SEMINAR IN AUDIOLOGY: THEORETICAL AND CLINICAL MASKING ..... 3 sem. hrs.**

The neurophysiologic and acoustic basis of problems of masking in auditory measurement are explored and training is offered in clinical masking procedures.

**74.580 INDEPENDENT STUDY AND RESEARCH ..... 3 sem. hrs.**

This course permits students to work, under close faculty guidance, on library study of specified areas or on individual research projects when particular needs cannot be met by registration in regularly scheduled courses.

**74.581 INDEPENDENT STUDY AND RESEARCH ..... 3 sem. hrs.**

(Refer to description for 74.580).

**74.582 INDEPENDENT STUDY AND RESEARCH ..... 3 sem. hrs.**

(Refer to description for 74.580).

**74.599 MASTER'S THESIS ..... 3-6 sem. hrs.**



## 5. SCHOOL OF BUSINESS

### Specialization in Business Education for the Master of Education Degree

**Purpose:** This specialization is intended to contribute to the professional maturation of the teacher of business subjects in secondary schools.

**Prerequisite:** Level I certification to teach business subjects.

**Required:** Business 90.561, 90.562; Economics 40.531; Master's Research Paper (65.599) or Seminar (90.581).

**Elective:** Graduate courses from categories 90, 91, 92, and 93 elected with approval of the adviser. Courses should be chosen that will extend and reinforce the student's knowledge, techniques and skills and provide critical understanding of current research in business education. At least nine semester hours must be chosen from Accounting (91) and Management and Marketing (93). The amount of elective credit may be determined from the comprehensive plan for the degree (Section 2.22).

#### COURSES

#### BUSINESS EDUCATION

(Code 90)

**90.533 BUSINESS STATISTICS ..... 3 sem. hrs.**

Principles applicable to, and procedures used in, collecting, tabulating, analyzing, presenting, and interpreting business and economic data. Measures of central tendency; sampling; time series; correlation; and index numbers.

**90.534 PRINCIPLES OF INSURANCE ..... 3 sem. hrs.**

Principles applicable to and uses of life, marine, casualty, and fire insurance contracts; basic legal concepts pertaining to insurance contracts and the responsibility of underwriters.

**90.551 IMPROVEMENT OF INSTRUCTION IN  
BUSINESS SKILL SUBJECTS ..... 3 sem. hrs.**

Current practices in the teaching of shorthand, typewriting, and secretarial practice; teaching aids and evaluative devices.

**90.552 IMPROVEMENT OF INSTRUCTION IN  
BASIC BUSINESS SUBJECTS ..... 3 sem. hrs.**

The contribution which basic business subjects can make to the educational program of the secondary school. Currently accepted methods and techniques of teaching such basic business subjects as General Business, Business Law, and Elementary Economics; teaching aids to effective instruction.

**90.553 IMPROVEMENT OF INSTRUCTION IN  
BOOKKEEPING AND BUSINESS ARITHMETIC ..... 3 sem. hrs.**

Recent developments in methods of teaching Bookkeeping and Business Arithmetic and a critical analysis of objectives serve as a basis for increasing the competence of the teacher of these subjects. Consideration is given to teaching aids designed to improve the effectiveness of the classroom instructor.

**90.561 FOUNDATIONS OF BUSINESS EDUCATION ..... 3 sem. hrs.**

History and present status of business education as the basis for developing an understanding of the objectives of and the philosophies underlying business education programs in the secondary school.

**90.562 CURRENT PROBLEMS OF  
BUSINESS EDUCATION ..... 3 sem. hrs.**

Major problem areas in business education, as revealed by a critical analysis of current professional literature.

**90.563 EVALUATION IN BUSINESS EDUCATION ..... 3 sem. hrs.**

Objectives of measurement in business education; evaluative devices and their effective use.

**90.564 ADMINISTRATION AND SUPERVISION  
OF BUSINESS EDUCATION ..... 3 sem. hrs.**

Principles and techniques associated with educational administration serve as the basis for a consideration of administrative and supervisory responsibilities of the business education department head.

**90.581 SEMINAR IN BUSINESS EDUCATION ..... 3 sem. hrs.**

An investigation and evaluation of completed research in Business Education. The student submits written reports which are used as the basis for class discussions.

## ACCOUNTING

(Code 91)

**91.521 ADVANCED COST ACCOUNTING ..... 3 sem. hrs.**

Cost determination procedures for budgetary control with standard costs.

*Prerequisite: 91.421.*

**91.522 ADVANCED AUDITING THEORY ..... 3 sem. hrs.**

Application of auditing theories and principles to problems, with emphasis on separation of audit working papers and reports.

*Prerequisite: 91.422.*



**91.523 ADVANCED TAX ACCOUNTING ..... 3 sem. hrs.**

Interpretation of federal and state partnership and corporate income tax laws. Case studies are employed to illustrate the proper preparation of returns, tax planning and research techniques. Social Security taxes, gift taxes, and estate taxes.

*Prerequisite: 91.423.*

**INFORMATION PROCESSING**

(Code 92)

**92.550 INFORMATION PROCESSING ..... 3 sem. hrs.**

A comprehensive introduction and basic orientation to the field of information processing for educational personnel. The student will be introduced to computers and associated peripheral devices. Remote terminals will be utilized through BASIC programming.

**92.552 PROGRAMMING LANGUAGES ..... 3 sem. hrs.**

Designed to familiarize educational personnel with the COBOL language and to develop the ability to use COBOL as an effective problem-oriented language through use of examples and work sessions. The student is requested to define, write, test, and debug several COBOL problems. Terminals will be utilized.

*Prerequisite: Business 92.550 or consent of instructor.*

**92.556 SYSTEMS DESIGN AND APPLICATION ..... 3 sem. hrs.**

Assisting educational personnel to utilize the full capabilities of the computer in his own classroom constitutes the major objective of this course. Using the computer as a tool of research and calculation, simulation games, computer-assisted testing, computer-managed instruction, and computer-assisted instruction are explored through readings, discussions, demonstrations, and guest lecturers. This course also includes the basic concepts of systems analysis, feasibility, design and implementation.

*Prerequisite: 92.552 or consent of instructor.*

# MANAGEMENT AND MARKETING

(Code 93)

## **93.531 PROBLEMS IN CORPORATION FINANCE ..... 3 sem. hrs.**

Problems in organizing and financing operations of industrial corporations, public utilities, and railroads. Special attention is given to the kinds of corporate securities used to secure both short-term and long-term capital.

## **93.532 PROBLEMS IN PUBLIC FINANCE ..... 3 sem. hrs.**

Principles governing the budgeting and financing of federal, state, and local government operations; analysis of the effects of public expenditures, taxation, and debt management on the economy of the United States.

## **93.541 RESEARCH IN MARKETING ..... 3 sem. hrs.**

An introduction to marketing research.

*Prerequisite: 93.342 or consent of the instructor.*

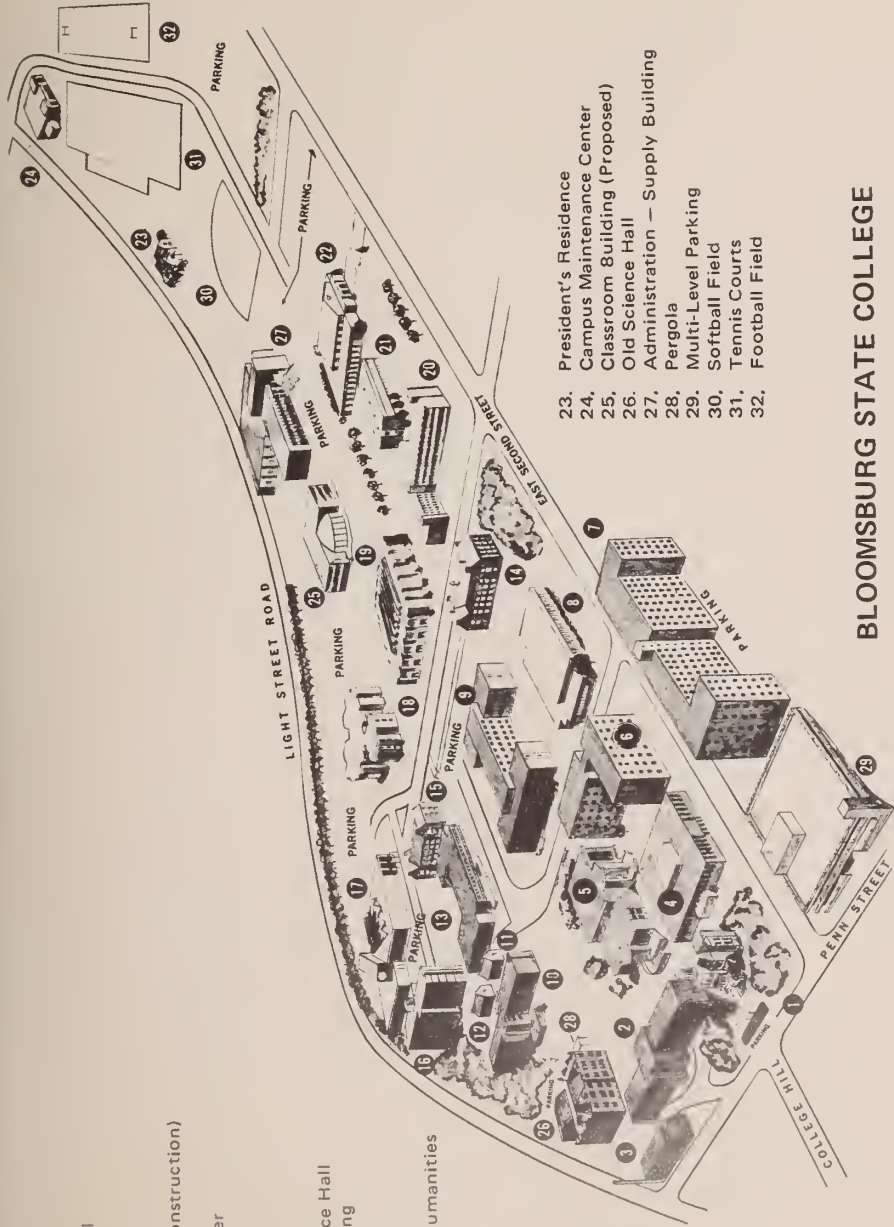
# INDEX

Academic Policies . . . . .	7	Humanities . . . . .	17
Academic Standards . . . . .	12	Library . . . . .	5
Accounting . . . . .	76	Living Accomodations . . . . .	6
Accreditation . . . . .	5	Location . . . . .	5
Administrative Personnel . . . . .	1	Management and Marketing . . . . .	78
Admission to Candidacy . . . 12, 14,	15	Marine Science . . . . .	55
Admission to Graduate Courses . . .	7	Master of Arts Degree . . . . .	14
Advisement . . . . .	9	Master of Education Degree . . . . .	12
Anthropolgy . . . . .	43	Master of Science Degree . . . . .	15
Attendance at classes . . . . .	10	Master's Degree Equivalence . . . . .	15
Biology . . . . .	45	Master's Thesis . . . . .	10
Business Education . . . . .	75	Mathematics . . . . .	52
Calendar . . . . .	3	Miller Analogies Test . . . . .	10
Categories of Graduate Students . .	8	Personnel, Administrative . . . . .	1
Chemistry . . . . .	50	Physical Science . . . . .	55
Communication Disorders . . . . .	70	Physics . . . . .	53
Comprehensive Social Studies . . .	30	Placement . . . . .	6
Course Numbering . . . . .	9	Political Science . . . . .	38
Credit . . . . .	9	Psychology . . . . .	44
Degree, Master of Arts . . . . .	7, 14	Purpose . . . . .	5
Degree, Master of Education . . .	7, 12	Reading . . . . .	62
Degree, Master of Science . . . . .	7, 15	Refunds . . . . .	6
Departmental Paper . . . . .	11	Registration . . . . .	10
Earth Science . . . . .	33	Repeating Courses . . . . .	12
Economics . . . . .	30	Scheduling of Classes . . . . .	7
Educational Studies and Services . .	57	School of Arts and Sciences . . . . .	17
Elementary Education . . . . .	59	School of Business . . . . .	75
English . . . . .	23	School of Professional Studies . . . . .	57
Equivalence Certificate . . . . .	15	Sciences and Mathematics . . . . .	45
Fees . . . . .	6	Secondary Education . . . . .	63
Financial Assistance . . . . .	6	Semester Load . . . . .	9
Foreign Languages . . . . .	17	Social Sciences . . . . .	30
French . . . . .	17	Social Studies . . . . .	30
General Information . . . . .	5	Sociology . . . . .	42
Geography . . . . .	31	Spanish . . . . .	21
German . . . . .	19	Special Education . . . . .	67
Grades and Averages . . . . .	11	Speech . . . . .	27
Graduate Assistantships . . . . .	11	Student Responsibility . . . . .	7
Graduate Council Members . . . . .	1	Thesis . . . . .	10
Graduate Courses in Senior Year . .	11	Time Limit . . . . .	7
History . . . . .	33	Transfer of Credit . . . . .	10
Housing . . . . .	6	Withdrawal . . . . .	10



# CAMPUS GUIDE

1. Carver Hall
2. Schuykill Residence Hall
3. Heating Plant
4. Scranton Commons
5. Student Center
6. Residence Hall (Under Construction)
7. Elwell Residence Hall
8. Temporary Student Center
9. Luzerne Residence Hall
10. Montour Residence Hall
11. Maintenance Building
12. Laundry
13. Northumberland Residence Hall
14. Benjamin Franklin Building
15. Navy Hall
16. Columbia Residence Hall
17. Haas Center for the Arts
18. Bakesale Center for the Humanities
19. Andruss Library
20. Hartline Science Center
21. Sutliff Hall
22. Centennial Gymnasium



23. President's Residence
24. Campus Maintenance Center
25. Classroom Building (Proposed)
26. Old Science Hall
27. Administration — Supply Building
28. Pergola
29. Multi-Level Parking
30. Softball Field
31. Tennis Courts
32. Football Field

**BLOOMSBURG STATE COLLEGE**  
**BLOOMSBURG, PENNSYLVANIA**



