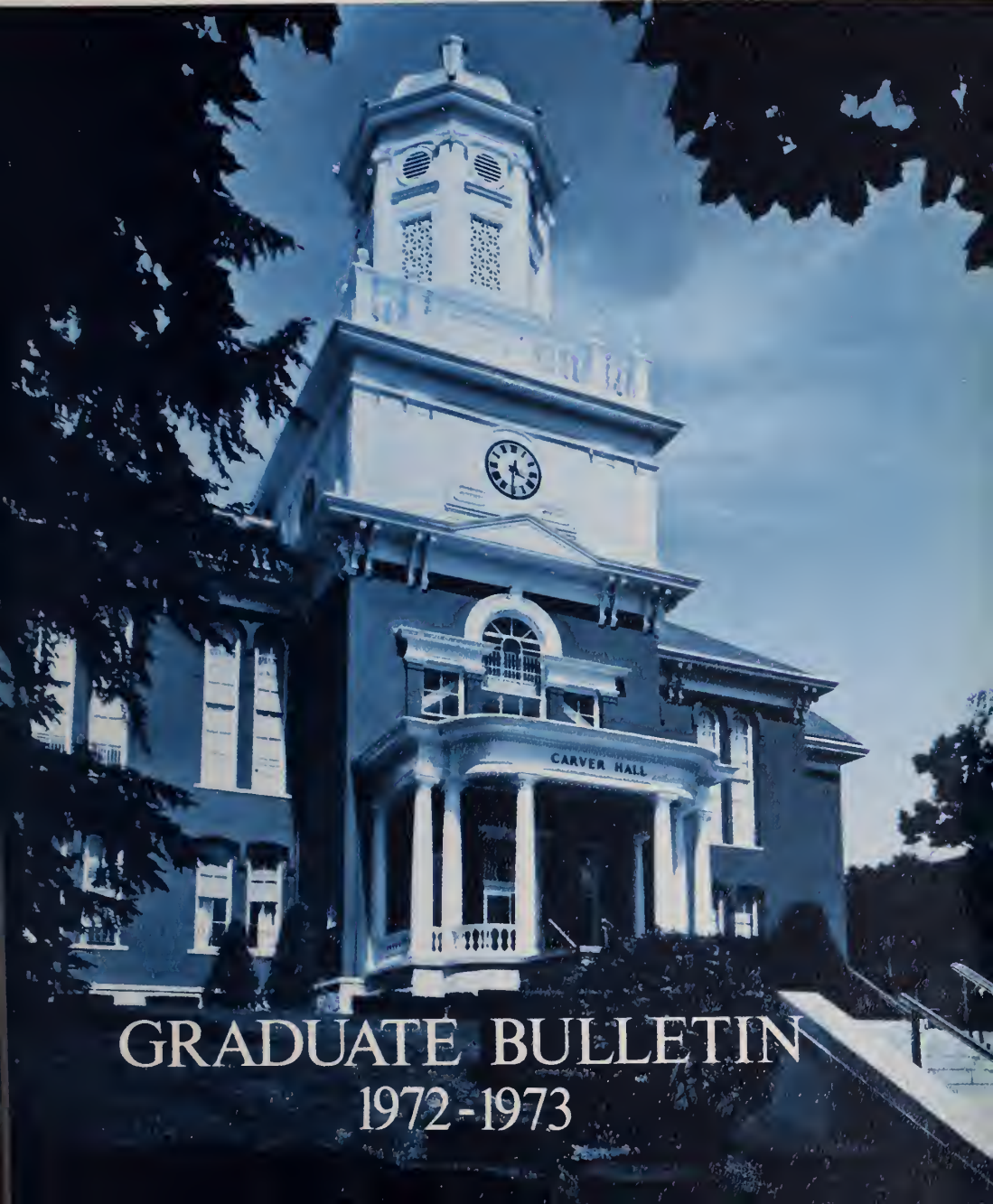
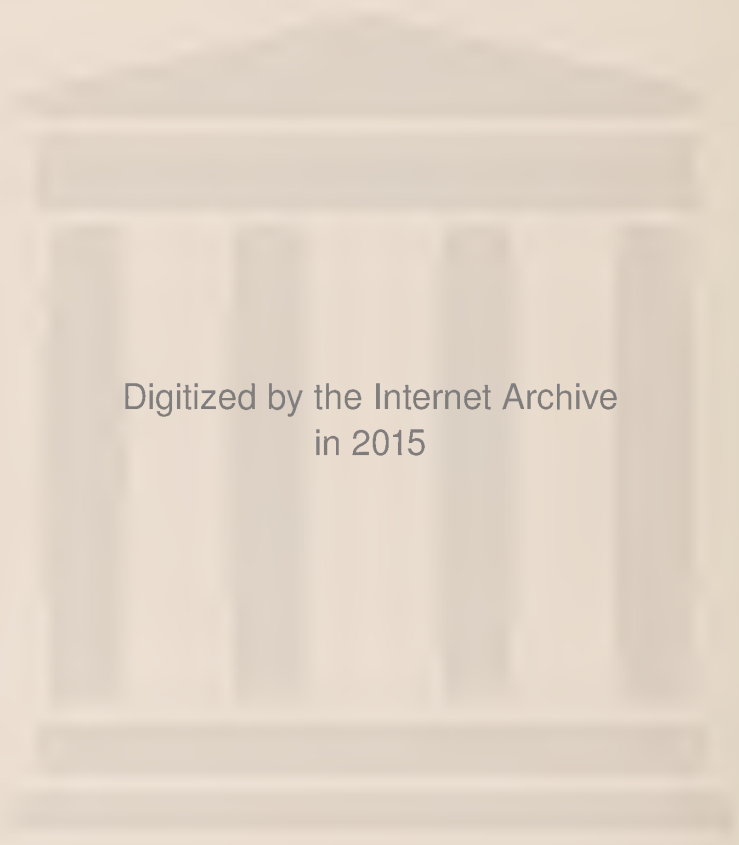


BLOOMSBURG  
STATE COLLEGE



GRADUATE BULLETIN  
1972-1973



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# ADMINISTRATIVE PERSONNEL

1972-73

- ROBERT J. NOSSEN *President*  
University of California, A.B.; Northwestern University, M.A., Ph.D.  
(Resigned, September 1, 1972)
- CHARLES H. CARLSON *Acting President*  
San Jose State College, B.A.; Columbia University, M.A., Ed.D.  
(1959)
- DAYTON S. PICKETT *Vice President and  
Dean of Faculties*  
U.S. Military Academy, B.S.; Iowa State University, M.S.; University  
of Denver, Ph.D. (1972)
- HOBART F. HELLER *Dean, School of Graduate Studies, and  
Director of Research Activities (Acting)*  
Gettysburg College, B.S.; Columbia University, M.A., Ph.D. (1970)

# GRADUATE COUNCIL

1972-73

- HOBART F. HELLER *Acting Dean, School of Graduate Studies*
- DAYTON S. PICKETT *Vice President and  
Dean of Faculties*
- BRUCE E. ADAMS, Professor *Geography*  
Lock Haven State College, B.S.; The Pennsylvania State University,  
M.Ed., Ed.D. (1956)
- EDSON J. DRAKE *Dean, School of Arts and Sciences*  
University of Notre Dame, B.A.; Georgetown University, M.A.,  
Ph.D. (1964)
- C. STUART EDWARDS *Dean, School of Professional Studies*  
Bloomsburg State College, B.S.; The Pennsylvania State University,  
M.Ed., Ed.D. (1958)
- WARREN I. JOHNSON, Associate Professor *Chairman,  
Elementary Education*  
West Chester State College, B.S.; The Pennsylvania State University,  
M.Ed. (1952)
- WILLIAM L. JONES, Professor *Director, Division of  
Human Resources and Services*  
University of Nebraska, B.A., M.Ed., Ed.D. (1964)
- MARGARET LEFEVRE, Professor *Communication Disorders*  
Western Michigan University, A.B.; University of Minnesota, M.A.;  
Western Reserve University, Ph.D. (1964)

THOMAS R. MANLEY, Associate Professor *Biological Sciences*  
Fairmount State College, B.A.; West Virginia University, M.S. (1961)

EMORY W. RARIG, JR. *Dean, School of Business*  
Bloomsburg State College, B.S.; Columbia University, M.A., Ed.D.  
(1968)

THOMAS G. STURGEON, Professor *English*  
Westminster College, A.B.; Harvard University, M.A., Ph.D. (1963)

WILBERT A. TAEBEL, Professor *Chemistry*  
Elmhurst College, B.S.; University of Illinois, M.S., Ph.D. (1966)

LOUIS F. THOMPSON, Professor *Chairman, English*  
Columbia College, A.B.; Lehigh University, M.A., Ph.D. (1963)

ROBERT D. WARREN, Professor *History*  
Appalachian State Teachers College, B.S.; Georgetown University,  
M.A., Ph.D. (1964)

LYNN A. WATSON, Associate Professor *Elementary Education*  
Shippensburg State College, B.S.; The Pennsylvania State University,  
M.Ed., Ed.D. (1966)

\* The date in parentheses represents the date of appointment to the  
Bloomsburg State College Faculty.

The College welcomes qualified students, faculty, and staff from all racial,  
religious, ethnic and socio-economic backgrounds.



# TENTATIVE GRADUATE CALENDAR

## 1972-73 ACADEMIC YEAR

- September 5 — Final date of registration for First Semester.
- September 6 — Classes begin for First Semester.
- November 1 — Final date for submitting application for graduation (including payment of graduation and binding fees).
- November 1 — Final date for submitting of completed Research Projects to the Dean of Graduate Studies for distribution to the Committee members. The time of the final oral examination of the Research will be set at this time.
- November 1 — Final date for completion of Research Projects, Departmental Papers and/or Comprehensive Examinations.
- November 22 — Thanksgiving recess begins at 5:00 p.m.
- November 27 — Thanksgiving recess ends at 8:00 a.m.
- December 21 — Graduation.
- December 22 — End of First Semester classes.

## 1973

- January 15 — Final date of registration for Second Semester.
- January 16 — Second Semester classes begin.
- March 15-16 — Mid-Semester Break.
- March 19 — Classes resume at 8:00 a.m.
- March 27 — Final date for submitting of completed Research Projects to the Dean of Graduate Studies for distribution to the Committee members, if May graduation is desired. The time of the final oral examination of the Research will be set at this time.
- April 10 — Final date for submitting application for graduation for the May graduation (including payment of graduation and binding fees).
- April 10 — Final date for completion of Research Projects, Departmental Papers and/or Comprehensive Examinations, for May graduation.
- April 13 — Spring recess begins at 5:00 p.m.
- April 30 — Spring recess ends at 8:00 a.m.
- May 23 — Second Semester ends at end of classes.
- May 24 — May Graduation.

## SUMMER 1973

- June 4 — July 13 — First Six Weeks.
- July 3 — Final date for submitting application for graduation (including payment of graduation and binding fees).
- July 3 — Final date for submitting of completed Research Projects to the Dean of Graduate Studies for distribution to Committee members. The time of the final oral examination of the Research is set at this time.



July 16 —  
August 14 —

August 24 — Second Six Weeks.  
Final date for completion of Research Projects, Departmental Papers, and/or Comprehensive Examinations.



# **1. GENERAL INFORMATION**

## **1.1 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.

## **1.2 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.

## **1.3 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 conveniently 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 155,000 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. Over 2,000 periodicals and 90 newspapers are received on a regular basis. The Learning Resources Center includes a collection of films, filmstrips, recordings, slides, transparencies, and other multi-media materials.

## **1.4 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.

## 1.5 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	\$36
Out-of-state Students — per semester hour	\$46
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.*

## 1.6 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.

## 1.7 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 Division stand ready to aid the student in his decision making, the final responsibility rests with the student.

### 2.02 DEGREES

Graduate study was inaugurated in 1960 with programs leading to the Master of Education degree planned for teachers in service. In 1968, approval was granted to offer a program in history to lead to the Master of Arts degree. Additional programs to lead to the Master of Arts and Master of Science degrees are currently in preparation.

The objective of programs for the degree, Master of Education, is to develop mature, professional teachers and other school personnel.

The objective of a Master of Arts program is to advance the student's scholarship in an academic discipline.

The objective of a program leading to the Master of Science degree 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 of time 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 for full-time students in the **summer terms**.

### 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 an application fee of \$10.00.

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

## **2.06 ADVISEMENT**

A student who is admitted to graduate study and who indicates a desire to become a candidate for a Master's degree is assigned a program adviser. The duties of the adviser 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; to endorse the student's application for candidacy as an expression of confidence in his ability to complete his chosen degree program successfully; 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.

## **2.07 SEMESTER HOUR LOAD**

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

## **2.08 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 which may be allowed in a student's program in such courses is limited.

## **2.09 TRANSFER OF CREDIT**

A maximum of six semester hours in graduate courses taken in other colleges may be credited toward a Master's degree. The transferred courses must have been taken in residence in an accredited college or university; 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.

## **2.10 EXAMINATIONS**

The Miller Analogies Test is required of each degree candidate. Time and place of the examination may be learned upon inquiry to the Dean of Graduate Studies.

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

## **2.11 RESEARCH — THESIS**

If the student chooses a research thesis option, a committee is named by the Dean of Graduate Studies to assume responsibility for guiding the study, certifying approval of the written report both in form and content, arranging for the defense if indicated or required, certifying satisfactory completion, and determining the grade. Three bound copies of the thesis must be filed with the Dean of Graduate Studies.

## 2.12 GRADES AND AVERAGES

Grades given for graduate courses are:

- A — Distinguished; scholarly work which exhibits independence and intellectual maturity.
- B — Good.
- C — Fair; acceptable toward a master's degree program within limits.
- D — Not acceptable in a degree program.
- E — Failing.
- I — Incomplete: work must be completed within four months unless the period is extended by the Dean of Graduate Studies for adequate reason.
- R — Research in Progress.
- W — Withdrawn with approval of the Dean.

The quality point equivalents of grades are: A = 4; B = 3; C = 2; D = 1; E = 0.

The Quality Point Average (Q.P.A.) is computed by the following process: (1) Multiply the number of quality points for each grade by the number of semester hours for the course; (2) add these products; (3) divide by the sum of the semester hours for all grades of A,B,C,D, and E. When a course has been repeated, both grades are counted.

## 2.13 REPEATING COURSES

No course with grade of C or higher may be repeated. A course with grade D or E must be repeated. Not more than two D or E grades may be repeated in any degree program and no degree will be awarded with a D or E grade on the record that has not been repeated.

## 2.14 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 Cumulative Quality Point Average must be 3.0 or higher.

If a graduate student falls below the graduation standard at any time he must petition the Graduate Council for permission to continue in his program.

## 2.15 THE MASTER OF EDUCATION DEGREE

### Admission to Candidacy

A student who has been admitted to graduate courses may apply for candidacy for the Master of Education degree by fulfilling the following additional conditions:

- (1) He must file with the Dean of Graduate Studies an application for admission to candidacy prior to his completion of 12 semester hours of graduate courses.

(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 must have taken the Graduate Qualifying Examination.

(4) He must submit a proposed program for the completion of the requirements for his degree; the program must bear the recommendation of his adviser and the department of his major and must account for all undergraduate prerequisites if there were deficiencies in his previous background.

(5) He 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 grades that average B or higher. Failure to secure admission to candidacy by the time fifteen hours of credit have been earned is equivalent to rejection of candidacy.

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

The course requirements for the degree, Master of Education, are in two categories with a minimum total of 30 semester hours, as follows:

Category I. Basic Courses in Professional Education and Psychology .....6 or 9 sem. hrs.

These comprise two required courses and an optional course as follows:

Required courses:

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

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

Optional Course: The candidate may elect to take one additional course chosen with approval of his adviser from:

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 Counselling..... 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.

Category II. Specialization ..... 24 or 21 sem. hrs.

The areas for specialization are:

(Note: Numbers in parentheses are code numbers for the disciplines. Comprehensive Social Studies and Physical Science have no code numbers.)

Biology (50)  
Business Education (90)  
Chemistry (52)  
Communication Disorders (74)  
Comprehensive Social Studies  
Elementary Education (62)  
English (20)  
French (10)  
Geography (41)  
German (11)  
History (42)  
Physical Science  
Physics (54)  
Political Science (44)  
Reading (63)  
Spanish (12)  
Special Education (Emphasis on Teaching  
Mentally Retarded) (70)  
Speech (25)

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.

## 2.16 THE MASTER OF ARTS DEGREE

### Admission to Candidacy

A student who has been admitted to graduate courses may apply for candidacy for the Master of Arts degree by fulfilling the following additional conditions:

- (1) He must file with the Dean of Graduate Studies an application for admission to candidacy prior to his completion of 12 semester hours of graduate courses.
- (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 must have attained a satisfactory score on the Graduate Qualifying Examination.
- (4) He must have had adequate undergraduate preparation in the field in which he will take his major. Arrangements for removing deficiencies, if any, are stated as part of the application for admission to candidacy.

Action on the application is taken after the student has completed at least 9 semester hours of graduate courses which he proposes to



submit as a part of his program, with grades that average B or higher. Failure to secure admission to candidacy by the time 15 hours of credit have been earned is equivalent to rejection of candidacy.

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

The course requirements for the degree, Master of Arts, comprise a minimum of 30 semester hours in courses in the discipline of the major and in such closely related concomitant disciplines as contribute to 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 only in the field of history. The requirements for the major are stated in the history section in the chapter on course descriptions.

## 2.17 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 30 semester hours. Because the purpose of this degree is more specific than that of the Master of Arts degree there may be a more extensive core of prescribed courses in a Master of Science program. 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 significance to the purpose of the program.

A thesis is required.

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

# 3. SCHOOL OF ARTS AND SCIENCES

## 3.1 HUMANITIES FOREIGN LANGUAGES

Specialization in French, German and Spanish for the Master of Education Degree

**Purpose:** These specializations are intended to enhance the competence of teachers of French, German and Spanish in secondary and elementary schools.

**Prerequisite:** An undergraduate major in the language.

**Required:** A Master's Research Paper or a Seminar course.

**Elective:** Courses in the chosen language are elected with approval of the adviser from the graduate offerings in that language; these may be supplemented by election of Education 62.526 or 65.568, the courses in teaching methods in languages. The student's program should include experiences in the communication skills, the literature and the structure of the language, the culture of the country, and problems involved in teaching the language. The total amount of elective credit may be deduced from the comprehensive plan for the degree (See Section 2.15).

**Examination:** A comprehensive examination is a requirement for graduation.

### FRENCH

(Code 10)

#### 10.501 LINGUISTICS .....3 sem. hrs.

An introduction to the study of language as a science. A history of languages in general, with particular attention to the Indo-European branch. The application of the science of linguistics to the teaching of languages.

#### 10.511 ROMANCE PHILOLOGY (FRENCH) .....3 sem. hrs.

Historical development of French phonology and morphology from their earliest beginnings to the present. A survey of the chief characteristics of Old French.

#### 10.512 EXPLICATION DE TEXTES.....3 sem. hrs.

French technique of textual and stylistic analysis. Practice in applying these techniques is undertaken through a series of analyses of the works of selected French writers.

#### 10.513 PHONETICS.....3 sem. hrs.

Study of the sounds of French through the application of the international phonetic alphabet, with a view to developing a thorough mastery of the correct pronunciation and intonation of the French

language. Laboratory drill with the latest recordings by leading phoneticians.

**10.514 ADVANCED GRAMMAR AND COMPOSITION .....3 sem. hrs.**

A conceptual approach to the study of French grammar. An intensive analysis of the various principles of French grammar and syntax. An evaluation of the changes which have occurred in French grammar and usage in recent decades.

**10.521 CORNEILLE, MOLIERE, AND RACINE.....3 sem. hrs.**

Analysis of the principal plays of Corneille, Moliere and Racine.

**10.522 18TH and 19TH CENTURY FRENCH THEATRE.....3 sem. hrs.**

Analysis of the principal plays of the enlightenment, with emphasis upon the popular theater of Diderot, the classical tragedies of Voltaire, the revolutionary plays of Beaumarchais, and the principal works of the 19th century theater.

**10.523 VOLTAIRE AND ROUSSEAU.....3 sem. hrs.**

Major works of Voltaire and Rousseau and a critical and analytical comparison of their respective philosophical points of view; their impact on the character of Western civilization.

**10.531 THE FRENCH NOVEL  
(TO THE END OF THE 19TH CENTURY).....3 sem. hrs.**

A history of the novel in France, with particular emphasis on the works of the major French novelists of the nineteenth century: Hugo, Stendahl, Balzac, Flaubert, and Zola.

**10.532 THE 20TH CENTURY FRENCH NOVEL.....3 sem. hrs.**

The French novel in the twentieth century and philosophical, social, and aesthetic doctrines which emerged from it. Analysis of masterpieces of outstanding novelists of the century.

**10.534 THE CONTEMPORARY FRENCH THEATER.....3 sem. hrs.**

Dramatic works of the 20th century are studied and analyzed against the history of the development of the theater in France. Techniques and innovations are analyzed with an assessment of their importance and impact on the modern theater.

**10.537 FRENCH POETRY TO BAUDELAIRE.....3 sem. hrs.**

French poetry from the beginnings to Baudelaire.

**10.538 FRENCH POETRY FROM BAUDELAIRE  
TO THE PRESENT.....3 sem. hrs.**

French poetry from Baudelaire to the present day.

**10.539 FRENCH LITERARY CRITICISM.....3 sem. hrs.**

French literary critics and their writings.

10.599 SEMINAR.....3 sem. hrs.

Seminar topics will be chosen to suit the needs of the students.

10.560 MASTER'S RESEARCH PAPER.....3 sem. hrs.

## GERMAN

(Code 11)

11.511 GERMANIC PHILOLOGY .....3 sem. hrs.

Development of Germanic phonology and morphology from their earliest beginnings to the present. A survey of the chief characteristics of Gothic, Old High German and Middle High German with appropriate examples.

11.514 ADVANCED GERMAN STYLISTICS.....3 sem. hrs.

Study of stylistic resources of modern German, based on reading and analysis of selected texts. Discussion; oral and written drill.

11.520 THE AGE OF GOETHE .....3 sem. hrs.

The Golden Age of German literature. German Enlightenment, *Sturm und Drang* and Classicism are studied. Literary masterpieces are read and analyzed. Special attention is given to English influences, especially Shakespeare.

11.521 GOETHE .....3 sem. hrs.

Goethe's works and his development toward classicism. A survey of the major critical works which deal with his life and writings.

11.522 SCHILLER .....3 sem. hrs.

Schiller's dramatic works and his development toward classicism. A survey of critical works which deal with his life and writings.

11.530 GERMAN REFORMATION, BAROQUE  
AND PSEUDO-CLASSICISM.....3 sem. hrs.

Literary trends in the period of Reformation and Counter-Reformation. The influence of French classicism upon German literature of the late 17th and 18th century is analyzed and discussed.

11.531 GERMAN LITERATURE OF  
THE 19TH CENTURY .....3 sem. hrs.

Romanticism, poetic realism, naturalism with special emphasis on the great dramatic and lyric poets of the period.

11.532 GERMAN DRAMA OF THE  
19TH AND 20TH CENTURIES.....3 sem. hrs.

Works of the major dramatists of the 19th and 20th centuries. Special attention is given to the dramatists of naturalism and expressionism.

- 11.533 MIDDLE HIGH GERMAN LITERATURE .....3 sem. hrs.**  
 Middle High German Literature, 1050—1300, with emphasis on the principal representatives of the Popular and Court Epic and the lyric poetry of the Golden Age.
- 11.540 NOVELLEN AND ERZÄHLUNGEN .....3 sem. hrs.**  
 The German Short Story from Romanticism to the present. German *Feuilleton*; special attention is given to Thomas Mann, Kafka and the post-second World War writers.
- 11.541 MODERN GERMAN POETRY.....3 sem. hrs.**  
 Modern German poetry with emphasis on Stefan George and his circle, and Rainer Maria Rilke.
- 11.542 MODERN GERMAN NOVEL.....3 sem. hrs.**  
 Naturalism, Impressionism, Expressionism and the “New Matter-of-Factness” with emphasis on Hesse, Thomas Mann, Doebelin and Kafka.
- 11.559 SEMINAR.....3 sem. hrs.**  
 Seminar topics are chosen to meet the needs of the students.
- 11.560 MASTER’S RESEARCH PAPER .....3 sem. hrs.**

## SPANISH

(Code 12)

- 12.501 CONVERSATIONAL SPANISH FOR TEACHERS.....3 sem. hrs.**  
 Functional conversation with major emphasis on vocabulary expansion, pronunciation, and mastery of Spanish syntactic and morphological patterns.
- 12.502 ADVANCED STUDY OF SPANISH  
 STRUCTURE AND STYLISTICS.....3 sem. hrs.**  
 Spanish grammar stressing creative written expression in the language.
- 12.503 ADVANCED SPANISH PHONETICS.....3 sem. hrs.**  
 A theoretical and practical approach to phonology, phonetics and phonetical transcription. Regionalistic and dialectal variations are also studied with Tomas Navarro Tomas’ standard text: *Manual de pronunciación española*.
- 12.511 SELECTED CIVILIZATION AND CULTURE .....3 sem. hrs.**  
 Panoramic view of Hispanic civilization in Spain and Latin America through discussion, realia and selected textbooks. Outside readings in Spanish are assigned.



**12.521 HISTORY OF SPANISH LITERATURE I.....3 sem. hrs.**

Medieval period. The history of Spanish literature to the Golden Age. The theater and its development. Didactic poetry and prose. Lyric poets: The Cancioneros.

**12.522 HISTORY OF SPANISH LITERATURE II .....3 sem. hrs.**

Classical period. The sixteenth and seventeenth centuries. Prominent figures of the Golden Age of Spanish literature: Lope de Vega, Calderon de la Barca, Tirso de Molina, Gongora, Quevedo, Fray Luis de Leon, and others.

**12.523 HISTORY OF SPANISH LITERATURE III .....3 sem. hrs.**

Modern period. Expronceda, Zorrilla, Becquer, Perez Galdos, and others.

**12.531 LYRIC POETRY .....3 sem. hrs.**

Evolution of Spanish lyric poetry with special emphasis on early forms. Renaissance italianate forms, and the blossoming of lyric poetry in the nineteenth and twentieth centuries.

**12.532 THE PICARESQUE NOVEL .....3 sem. hrs.**

The picaresque novel and its origin in Spain. Vida de Lazarillo de Tormes and others.

**12.533 CERVANTES .....3 sem. hrs.**

Detailed study and analysis of the life and works of Miguel Cervantes Saavedra: Las novelas ejemplares, and others, all of which lead to a study of the meaning, philosophy and influence of Don Quixote.

**12.541 THE GENERATION OF '98.....3 sem. hrs.**

Principal works and intellectual trends of the period with specific emphasis on Unamuno.

**12.542 MODERNISMO .....3 sem. hrs.**

The movement, its antecedents, and its followers, with emphasis on Ruben Dario.

**12.543 TWENTIETH CENTURY SPANISH  
AMERICAN NOVEL .....3 sem. hrs.**

Study and analysis of the novel to include the works of Azuela, Gallegos and Cela.

**12.546 THE CONTEMPORARY SPANISH THEATER.....3 sem. hrs.**

A study of Benevente, Garcia Lorca, Alejandro Casona and others.

**12.551 SPANISH LANGUAGE WORKSHOP.....3 sem. hrs.**

For in-service teachers desiring to increase their teaching proficiency. The audio-lingual approach to language teaching is stressed. The language laboratory and audio-visual teaching materials.

**12.559 SEMINAR.....3 sem. hrs.**

Seminar topics are chosen to suit the needs of the students.

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

A research paper on a specific topic. Topic approval by the advisor is required.

## ENGLISH

(Code 20)

### 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. The recommendations in the report *Freedom and Discipline in English* have influenced the formulation of the program.

Required: 20.500 or 20.531; 20.493.

Elective: Courses selected from the courses in English (Category 20) in this bulletin. The total amount of elective credit may be deduced from the comprehensive plan for the degree (See Section 2.15).

**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.

**20.505 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 genre — drama, novel, poetry — and on independent study in varied areas of literature and aesthetics.

**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.

**20.531 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 STUDIES IN BRITISH LITERATURE I .....3 sem. hrs.**

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

**20.534 STUDIES IN BRITISH LITERATURE II.....3 sem. hrs.**

Continuation of content and method of 20.533.

**20.535 STUDIES IN BRITISH LITERATURE III.....3 sem. hrs.**

Continuation.

**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, Marlow, 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.

**20.554 MILTON..... 3 sem. hrs.**

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

**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.

(For the total degree requirements, see Section 2.15)

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 style and delivery. Measures of effectiveness and an inquiry toward a 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 rhetoric 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: A beginning course in Oral Interpretation.*

**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: Beginning Acting.*

**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.

*Prerequisite: Beginning Costuming.*

**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: Beginning Directing.*

**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: History of the Theatre.*

**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: Beginning Theatre Production.*

**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 design in a production book.

*Prerequisite: Theatre Production.*

**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 ability to employ accepted methods of carrying on and reporting research in the solution or intensive study of some area of interest or concern to him.

## 3.2 SOCIAL SCIENCES

(Codes 40 - 48)

### Specialization in Comprehensive Social Studies for the Degree, Master of Education

Comprehensive Social Studies defined for the purpose of this program as comprising Economics (40), Geography (41), History (42), Political Science (44), Sociology (45), and Anthropology (46).

The candidate for the Master of Education degree with specialization in Comprehensive Social Studies must choose a concentration from history, political science or geography. Having chosen a concentration, the remaining five disciplines of the social studies are called "related fields" with respect to that concentration.

Requirements for Specialization: Twenty-one or twenty-four semester hours comprising:

- 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 may be included as recommended by the adviser.

A comprehensive examination is a requirement for graduation. For total degree requirements see Section 2.15.

## 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.

Analysis of the main economic activities under diverse systems of organization, influence of variations in resources, technology, and social values. Comparative treatment of Soviet-type economics, market socialism and Western "mixed" economics.

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

An analysis of international trade with consideration to contemporary problems facing international trade and to the impact of governmental policy upon international commercial relations.

## **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 background for teaching, and to 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 2.15).

## **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.

## 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 have a reading knowledge of French, German, Russian or Spanish as demonstrated through the Graduate Foreign Language Reading Examination of the Educational Testing Service.

**Comprehensive Examination:** An oral and/or written examination (separate from the defense of thesis) is required; two aspects of the major and an aspect of the minor may be selected by the student to be included in the examination. The examination is conducted by a committee selected by the student's adviser. The examination 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:** Twenty-one or twenty-four semester hours in one of the three designated areas of history and including the appropriate course in Readings and seminar.

The colloquium course in one of the remaining two areas;  
History seminar or thesis.

(For the total degree requirements  
see Section 2.15)

**COURSES**  
(Code 42)

- 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 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 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 communications 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 SEMINARS IN NON-WESTERN HISTORY .....3 sem. hrs.**

Lectures, reports and a research paper on an area of 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, on 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.



- 42.594 COLLOQUIUM IN MODERN EUROPEAN HISTORY .....3 sem. hrs.**  
 Readings and discussion of major interpretations of modern European history.
- 42.595 COLLOQUIUM IN RECENT NON-WESTERN HISTORY.....3 sem. hrs.**  
 Readings and discussion of major interpretations of major non-Western areas and their history.
- 42.596 COLLOQUIUM IN UNITED STATES HISTORY.....3 sem. hrs.**  
 Readings and discussion of major interpretations of United States history.
- 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)

Specialization in Political Science for the  
 Master of Education Degree

Elective Courses: At least fifteen semester hours must be chosen from the courses in Political Science (44). A maximum of six semester hours may be elected from cognate areas. The total amount of credit for the specialization may be deduced from the comprehensive plan for the degree (See Section 2.15). Elective courses must be approved by the adviser; approval of courses in cognate areas depends upon their significance.

Examination: A comprehensive written and oral examination is required as a condition for graduation. For total degree requirements see Section 2.15.

- 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 and organizational theory to the operations of governmental bureaucracies. Topics covered include: Planning-Program Budgeting Systems (PPBS), Program Evaluation Review Technique (PERT), and Operations Research (OR).

**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, metro-politics, 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.

**44.487 (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 on the basis of consultations 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 in 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.

**44.593 ADVANCED READINGS IN GOVERNMENT  
AND POLITICS.....3 sem. hrs.**

Designed for either group or individual study. Topics to be selected by the instructor in consultation with the student.

**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.

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

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

## **SOCIOLOGY**

(Code 45)

**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 as considered in light of current thinking and research.

**45.515 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.

**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)

**46.501 STUDIES IN ANTHROPOLOGY .....3 sem. hrs.**

Processes of human evolution and cultural dynamics, utilizing the findings of physical and cultural anthropology.

**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; utilization and audio-visual background material.

**46.550 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.

## 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 in public schools and guidance services. 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.

## 3.3 SCIENCES AND MATHEMATICS

### BIOLOGY

#### The Master of Science Degree

**Purpose:** This program is intended to prepare for admission to a research-oriented doctoral degree program in Biology.

**Prerequisite:** An undergraduate major in Biology, with one year of college physics and the equivalent of Calculus II and Organic Chemistry II. 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 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 chosen with the adviser's approval from Biology 50.411, 431, 432, 441, 453, 454, 455, 457, 458, 459, 463, 472, 511, 521, 531, 532, 552, 553, 554, 555, 561, 571, 572, Education 65.566, 65.567, with no more than 9 semester hours in the 400-level courses. The total amount of elective credit may be deduced from the comprehensive plan for the degree (Section 2.15).

Examination: A written and/or oral comprehensive examination.

#### 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.

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

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

Mechanics of evolution; nature and behavior of genes; factors effecting gene frequencies; speciation mechanisms; population analysis.

*Prerequisite: 50.332.*

#### 50.432 STUDIES IN SPECIATION: SOUTHEAST STATES.....3 sem. hrs.

A study of flora and fauna in areas where biotas merge providing opportunities for interspecific hybridization. A field course conducted off



campus, area will vary. A research opportunity in an area where sympatry exists. Research should be confined to a single genus or species.

*Prerequisites: 50.332 and 50.431.*

**50.433 STUDIES IN SPECIATION:  
SOUTHWEST STATES.....3 sem. hrs.**

(Refer to description for 50.432)

**50.434 STUDIES IN SPECIATION:  
ROCKY MOUNTAIN STATES.....3 sem. hrs.**

(Refer to description for 50.432)

**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 and 52.231.*

**50.453 SOCIAL IMPLICATIONS OF BIOLOGY .....3 sem. hrs.**

Biology as related to contemporary problems: population, food, environments, etc. The course is directed toward those who are concerned with the state of biology in modern times; there are no course prerequisites.

**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. 3 hrs. lecture, 2 hrs. laboratory/week.

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

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

Practical application of knowledge of microorganisms; their effects on our environment; methods of control; sanitation regulations and testing procedures. Field trips taken when practical.

*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.

**50.458 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.

*Prerequisites: 50.210 and 220.*

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

The basic biology of birds with emphasis on their ecology and identification in the field. Saturday morning field trips.

*Prerequisite: 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, autoradiography, nature work in close-ups, 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.

*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.**

The in vivo and in vitro study of growth, differentiation, and morphogenesis. 2 hrs. lecture, 2 hrs. laboratory/week.

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

The study of macromolecules, 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 will be 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.

**50.553 (451) ANIMAL ECOLOGY .....3 sem. hrs.**

A course in animal-environmental relationships with emphasis on population ecology. Basic knowledge of ecology is assumed.

**50.554 (452) PLANT ECOLOGY .....3 sem. hrs.**

Plants and their interactions with the environment; populations and communities and their respective successions. Field trips. 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 (462) BIOLOGY OF THE ARTHROPODS.....3 sem. hrs.**

A study of the anatomy of arthropods, including function, morphology, histology, embryology and metamorphosis. Laboratory will provide opportunity for dissections, preservation of tissues and experimentation with live arthropods.

*Prerequisite: 50.311.*

**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.

*Prerequisite: 12 hours of biology 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.

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

A comparison of the general physiology of different groups of animals.

*Prerequisites: 8 hrs. zoology and 8 hrs. chemistry.*

**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 of function. 2 hrs. lecture, 3 hrs. laboratory/week.

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

A course in which the student is given the opportunity to carry on an independent investigation in an area of biology in which he 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 to become familiar with the newly developed programs for Secondary Schools; and to acquaint him with the literature of his field and increase his ability to use it effectively in research and in 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 2.15)

**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 fundamental 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 such physio-chemico techniques as 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 & 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.

**52.551 CHEMISTRY PROJECTS LABORATORY .....3 sem. hrs.**

Laboratory work in any field of chemistry according to the needs and desires of the student and for which the department is prepared to supervise. Requires approval of the Program Advisor and any other faculty member involved in the work.

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

This course will concern itself principally 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 the Department is willing to assume the supervision of. Approval of the Department Chairman required.

**52.592 MASTER'S DEPARTMENTAL 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 Advisor is required.

**52.599 CHEMICAL RESEARCH.....3 or 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 Advisor 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.

## 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 the opportunity for him to become familiar with the newly developed programs for Secondary Schools; and to acquaint him with the literature of his field and increase his ability to use it effectively in research and in self-education.

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

**Requirements:** At least 18 semester hours in Physics courses normally including the areas of Mechanics, Electricity and Magnetism, and Modern Physics. (See Section 2.15)

**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, lab 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, lab work, philosophy, and method of teaching.

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

Individual investigation (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 DEPARTMENTAL PAPER..... 3 sem. hrs.**

An extended paper showing mastery of a topic or area in physics of instructional value to the student. Some lab work may be included. Approval of Research Advisor is required.

**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. Approval of the Research Advisor and of the Department Chairman is required.

## PHYSICAL SCIENCE

Specialization in Physical Science  
for the Master of Education Degree

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

**Requirements:** At least 18 semester hours in Chemistry and Physics courses with no less than six credits in each field. (See Section 2.15)

## 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. James Lauffer, Director of the Marine Science Consortium, Bloomsburg State College.

# 4. SCHOOL OF PROFESSIONAL STUDIES

## 4.1 EDUCATION

### EDUCATIONAL STUDIES AND SERVICES

(Code 60)

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

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

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

The effects on the school program of social class, family and community pressures, and changing patterns and standards of life in our society. Basic understanding of these pressures and patterns are developed 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 influencing the development of 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.

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

Designed to give the student a greater awareness of problems of the urban educational system. The course emphasizes a growth of sensitivity to the disadvantaged youngster, provides for an in-depth examination of current research findings in each area studied, develops teaching strategies and resources, and provides various approaches to resolve major problems. Discussion of polarization on critical problem areas.

**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 the strengths and weaknesses of educational media; design of learning situations which incorporate the techniques in instructional technology.

**60.515 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.

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

Concepts and techniques essential to the guidance process in the elementary school; behavioral and developmental problems, and problems associated with the releasing of creative capacities of children.

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

Construction, administration, and interpretation of results of group tests of intelligence, achievement, aptitude, and personality.

**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 results of group tests of intelligence, achievement, aptitude, and personality.

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

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

## **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 60.502; Master's Research Paper or a departmental paper in Elementary Education; Six to nine semester hours in courses from academic areas which are so related to the teacher's work that they may be integrated into a meaningful total program.

**Elective:** Elective courses may be chosen from 60.503, 60.506, 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 is a graduation requirement. For total degree requirements see Section 2.15.



## COURSES

(Code 62)

- 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. 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 the analysis of content rather than goals and organization.

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

Problems resulting from the increased interest of children in science and the public demand 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 elementary 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.

**62.599 MASTERS RESEARCH PAPER..... 3 sem. hrs.**

Student demonstrates his 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:** Master's Research Paper.

**Elective:** Courses selected from 60.533, 62.528, English 20.501, and the courses in Reading (Category 63). The total elective credit required may be deduced from the comprehensive plan for the Master of Education degree (See Section 2.15). Elective courses must be endorsed by the adviser.

**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 a laboratory situation.

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

Psychological foundations of reading in light of their relative effect on reading achievement.

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

Clinical experience in the diagnosis and remediation of reading problems; diagnosis, development, administration, and evaluation of individual programs, including written case studies.

**63.544 READING CLINIC II** .....3 sem. hrs.  
Clinical experience in the development of reading speed and comprehension with persons who may or may not have remedial problems. Combined with 63.543 gives experience with all levels.

**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 of reading in the school curriculum. Varied types of reading programs are examined. An original reading proposal is required of each student.

**63.546 READING 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 teaching of reading. New curriculums, materials, and procedures of teaching reading.

**63.548 DIAGNOSIS AND TREATMENT OF LEARNING DISABILITIES** .....3 sem. hrs.

## SECONDARY EDUCATION

(Code 65)

**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 THE 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 IMPROVEMENT OF CLASSROOM INSTRUCTION THROUGH SELF ANALYSIS ..... 3 sem. hrs.**

To help classroom teachers improve their instruction through systematic self analysis. Content includes micro teaching techniques, planning dimensions, Flanders' Verbal Interaction Analysis, Guided Self Analysis, cognitive and affective educational objectives and writing behavioral objectives.

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

Student demonstrates his 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.

## 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 mentally retarded, to develop a potential for leadership, and to prepare for further graduate study in the field.

**Prerequisite:** Certification for Teaching the Mentally Retarded (Instructor Level I).

**Required Courses:** 70.501, 70.516, 70.544, 71.501; one course from 71.515, 71.525; Master's Research Paper 71.599 or a departmental paper.

**Elective:** Courses from categories 70 and 71, as approved by the adviser, to complete the minimum specialization requirement (See Section 2.15).

**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.

**70.501 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 the 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.

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

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

**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 Measurement, or its equivalent.*

**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 problems which are of individual interest to the student.

## **TEACHING THE MENTALLY RETARDED**

(Code 71)

**71.501 MENTAL RETARDATION.....3 sem. hrs.**

Intensive review of research pertaining to etiology of mental retardation, or 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.

**71.515 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 competencies in developing adequate, meaningful curricular experiences for the retarded at various levels.

**71.525 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.

**71.530 EDUCATIONAL AND VOCATIONAL GUIDANCE FOR THE MENTALLY RETARDED.....3 sem. hrs.**

Criteria for ultimate adjustment, achievement, and other goals. Occupations are considered relative to satisfactory employment. Relationship of vocational guidance and age level to long range curricular planning. Investigation and analysis concerned with manual skills at various developmental levels. Experience is provided in job-analysis for skills involved and in surveying job-adjustments of retarded adults.

**71.432 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.

**71.552 SPECIAL PROJECT .....3 sem. hrs.**

Designed to further students' own interest and competency in an area of Special Education for the Mentally Retarded. Library research or individual projects involving service to the mentally retarded may be assigned and conducted under supervision of a staff member.

**71.599 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

**Purpose:** This program is intended to extend the competencies of clinicians in public schools, clinics and hospitals, to meet the academic requirements for the Certificate of Clinical Competence in Speech Pathology or in Audiology issued by the American Speech and Hearing Association, and to prepare for further graduate study in the field.

**Prerequisite:** Initial Level I certification in Speech Correction, or equivalent courses, or conditional admission with deficiencies to be made up.

**Required Courses:** Master's Research Paper or a departmental paper; Supervised Clinical Practice 74.553 or 74.554, including practice equivalent to minimum requirements for the *Certificate of Clinical Competence*.

**Elective Courses:** Electives may be chosen from the courses in Category 74. Psychology 48.521 and Special Education 70.532 are also open for election. Elective courses must have the approval of the adviser. The minimum amount of elective credit may be deducted from the comprehensive plan for the Master of Education degree (See Section 2.15).

## 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 co-operative 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.

The developmental aspects of language, normal and abnormal speech, and hearing patterns of individuals are discussed in relation to their personality. Current educational and therapeutic trends and practices are reviewed.

*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 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 schools are examined. Merits of existing programs are considered. Educational structures, 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 subjected to intense 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 of 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.**

Selected topics related to stuttering and to stuttering behavior and may include diagnosis, therapy or related implications and research.

**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 FOR HEARING DISORDERS .....3 sem. hrs.**

Hearing losses and deafness affecting the personal, socio-economic adjustment of individuals are evaluated and treated through supervised study and experience. Externships may be arranged in approved private and public institutions. Proper arrangements relating to student interest must be approved by graduate adviser.

**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.

**74.564 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 HEARING IMPAIRMENT .....3 sem. hrs.**

Current problems and innovative trends in the field of education of the deaf and hearing impaired. The course identifies bibliographic source materials relating to the education and rehabilitation of the hearing impaired. New techniques and methodologies in these areas are identified and examined.

**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 education subjects to the hearing impaired are examined with emphasis on content and methods rather than theory.

**74.570 PRACTICUM WITH THE HEARING IMPAIRED .....3 sem. hrs.**

Hearing losses affecting the communicational, educational and vocational adjustment of individuals are evaluated through supervised observation, clinical practice and student teaching 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.

**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 habitative 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 kinesiologic phonetics and phonetic metamorphology is studied in relation to anatomical and physiological processes of the speaking act. Evaluation 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)

# 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 41.531; Master's Research Paper (65.599) or Seminar (90.588).

**Elective:** Graduate courses from categories 90 and 91 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 91.521, 522, 523, 531, 532, 533, 534, 541. The amount of elective credit may be determined from the comprehensive plan for the degree (Section 2.15).

## 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 classroom instruction.

**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.*

## **MANAGEMENT AND MARKETING**

**(Code 93)**

**93.531 PROBLEMS IN CORPORATION FINANCE .....3 sem. hrs.**

Problems encountered 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.*

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30. Softball Field
31. Softball Field
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**BLOOMSBURG STATE COLLEGE**  
BLOOMSBURG, PENNSYLVANIA

LEGEND  
● PROPOSED BUILDINGS ● EXISTING BUILDINGS

