

2000-2002 Graduate Catalog

East Stroudsburg University of Pennsylvania
East Stroudsburg, Pennsylvania 18301-2999



A Member of Pennsylvania's State System of Higher Education

Office of Graduate Studies	570-422-3536
Toll Free	1-866-837-6130
Graduate School (FAX)	570-422-3506
ESU Main Number (voice mail)	570-422-3211

Website www.esu.edu

On the Cover: Dr. Kathleen Brunkard supervises a student who is preparing a suspension of fern spores to be distributed on a petri dish for germination and growth. Using this technique the effects of population density on growth and development can be examined.

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Graduate School Calendar

Fall Semester	2000-2001	2001-2002*
Semester begins Tuesday, 9 a.m.	September 5	September 4
	Student Registration	
	Faculty meetings	
Classes begin Wednesday, 8 a.m.	September 6	September 5
Last Day to Enroll in Courses	September 19	September 18
Deadline:		
Application for December graduation	October 1	October 1
Comprehensive Examinations	November 4	November 3
MSES Comprehensive Examinations	November 4	November 3
Last Day to Schedule Oral Examinations	November 24	November 23
Thanksgiving Recess begins Tuesday, 10 p.m.	November 21	November 20
Classes resume Monday, 8 a.m.	November 27	November 26
Last Day to Take Oral Examinations	December 8	December 7
Last Day to Submit Completed Thesis	December 20	December 19
Fifteenth week	December 18-22	December 17-21
Classes end Friday, 10 p.m.	December 22	December 21
Commencement 10 a.m.	December 23	December 22
Interession		
Classes begin 8 AM	January 2	January 2
Classes end Friday, 10 PM	January 19	January 18
Spring Semester		
Classes begin Monday, 8 a.m.	January 22	January 21
Last Day to Enroll in Courses	February 2	February 1
Deadline:		
Application for May Graduation	MARCH 1	MARCH 1
Comprehensive Examinations	March 3	March 2
MSES Comprehensive Examinations	March 3	March 2
Spring recess begins Friday, 10 p.m.	March 16	March 15
Classes resume Monday, 8 a.m.	March 26	March 25
Last Day to Schedule Oral Examinations	April 13	April 12
Last Day to Take Oral Examinations	April 27	April 26
Last Day to Submit Completed Thesis	May 9	May 8
Classes end Friday, 10 p.m.	May 11	May 10
Commencement, Saturday, 10 a.m.	May 12	May 11
Summer Sessions		
Pre Session		
Classes begin Monday, 8 a.m.	May 29	May 28
Comprehensive Examinations	June 9	June 8
Deadline:		
Application for August Graduation	June 15	June 15
Pre Session ends Friday, 10 p.m.	June 15	June 14
Main Session		
Classes begin Monday, 8 a.m.	June 18	June 17
Independence Day Holiday—No Classes	July 4	July 4
Main Session ends Friday, 10 p.m.	July 27	July 26
Post Session		
Classes begin Monday, 8 a.m.	July 30	July 29
Post Session ends Friday, 10 p.m.	August 17	August 16

*The 2001-2002 Calendar is subject to final approval.

Mission and Objectives

Governance

East Stroudsburg University is one of fourteen State-owned institutions in the Pennsylvania State System of Higher Education whose mission is undertaken on behalf of those who support it—the citizenry—through their governor and legislature, students and alumni, and other friends who share its commitments.

Mission

The Mission of East Stroudsburg University is to provide high quality programs in both traditional and emerging fields of study which recognize and promote human and intellectual diversity, and to prepare graduates to enter a complex, changing global society with competence and confidence.

Purposes and Scope

- In pursuit of this mission, East Stroudsburg University seeks to:
- Offer affordable programs at the associate, baccalaureate, and graduate levels, as well as opportunities for lifelong learning;
- Offer an intellectually challenging environment which enhances each student's critical thinking and communicative and quantitative skills;
- Provide resources for creating a learning environment conducive to the pursuit of excellence in areas such as the library, the classroom, laboratories, instructional technologies, and student co-curricular activities;
- Identify, recruit, and retain students representing a multicultural world who by background, motivation, and commitment can benefit from higher education;
- Attract and retain a diverse, recognized, and credentialed faculty committed to excellence in teaching and continuing scholarship;
- Develop a university community committed to personal, professional, and social values appropriate to an educated individual;
- Provide expertise and service to the community, region, state, nation, and the world;
- Create opportunities for the university community to develop positive, healthy, and integrated lifestyles;
- Serve as a primary source of cultural and intellectual programs of importance to students and residents of the region; and
- Maintain a partnership with its alumni to benefit both the alumni and the

General Information

The University

East Stroudsburg University is one of the fourteen institutions in the Pennsylvania State System of Higher Education. Founded in 1893 as a Normal School to prepare teachers, the institution changed its name in 1927 to East Stroudsburg State Teachers College and again in 1960 to East Stroudsburg State College, reflecting the addition of liberal arts and science curriculums. In 1983, it achieved university status.

History of the Graduate School

East Stroudsburg University inaugurated its graduate school in 1962 with programs in health and physical education, biology, history, and political science. Since then, other departments have established degree programs, the most recent being the Master of Science in speech language pathology (1997) preceded by the Master of Public Health in community health education (1990) and the Master of Science in physical education with a major in cardiac rehabilitation and exercise science (1987).

The university awarded its first graduate degrees in 1964. At that time, the total annual graduate school enrollment was 194. Since then enrollment has grown steadily and now exceed 1,000 graduate students each semester. The university has awarded more than 4,000 graduate degrees since 1964 .

The Campus

There are 59 campus buildings located on 165 acres in the East Stroudsburg community. In addition to the academic facilities, there are nine residence halls (housing 2,200 students) and a 1,000-seat dining hall. The Student Activity Association, Inc., owns Stony Acres, a 119-acre off-campus student recreation area near Marshalls Creek that includes a lodge and a small lake.

Academic Buildings

The primary academic building is Stroud Hall. This four-story classroom building contains lecture halls, computer and language laboratories, instructional spaces and office areas. Beers Lecture Hall, which opened in 1997, seats 140 students and serves as a distance learning facility. The Fine and Performing Arts Center consists of two theatres, a gallery, concert hall, rehearsal areas, various art studios, and classrooms. Koehler Fieldhouse serves as the primary physical education facility.

Other major classroom buildings are: Moore Biology building which contains a large group lecture hall, a greenhouse and wildlife museum; Gessner Science Hall which contains laboratories for physics and chemistry; DeNike Center for Human Services which houses classrooms and has laboratory areas for the departments of health, nursing,

recreation, and leisure services management; LaRue Hall, which houses laboratories for speech pathology and audiology; and Rosenkrans Hall which houses the school of Graduate Studies and Faculty Research..

The Library

K e m p
Library houses
more than
437,977 books
and periodical
volumes, and
1,290,824
pieces of
mic-roform
material. The
library currently
subscribes
to more than
1,900 period-
icals including
subscriptions to
more than 50



periodicals in electronic form. The library is also a depository for both U.S. Government Documents and Pennsylvania State publications, with 77,010 documents in the collection. The library uses an integrated online library system for cataloging, circulation, and other functions. The system is accessible in the library, on the campus network, or via modem. Several full-text databases are available for searching, either in the library or on the library's web page. Current students and faculty can receive passwords to search these databases from off-campus sites. User guides are available in the library and on the library web page.

The Curriculum Materials Center provides teacher-trainees with a special collection of over 7,414 items including a selection of textbooks currently used in schools throughout the country and a comprehensive collection of school courses of study.

Academic Support Facilities

The University Computing Center supports both administrative and academic computing. Administrative computing is served by a UNISYS mainframe, encompassing over 30 on-line systems and providing services to the students, faculty and staff.

The Academic Computing network consists of 14 UNIX or Windows NT-based servers that are connected to 600 microcomputers provided to support instruction, internet access, World Wide Web, and E-mail. There are 15 networked computer laboratories across campus. Additionally, many academic departments maintain discipline-specific computer laboratories for their curricula.

The McGarry Communication Center is the campus base for the Instructional Resources Department including the audiovisual, graphics, and television services units. The Communication Center houses two television studios and is the distribution center of campus cable television as well as the community-wide ESU television telecasts. WESS 90.3 FM radio is also located in the center.

Administration and Faculty

The graduate school at East Stroudsburg University coordinates all programs leading to degrees and certificates beyond the Bachelor's degree. The chief administrator of the graduate school is the Dean of Graduate Studies and Research. The Dean works under the supervision of the Provost and Vice President for Academic Affairs and sits on the Provost's Council.

The Graduate Advisory Committee works with the Dean of Graduate Studies in reviewing graduate school procedures and in preparing policy recommendations and consists of the graduate coordinators of all departments offering graduate degrees.

The academic departments initiate graduate course proposals to be considered by the University Curriculum Committee. The Provost's Council reviews all course and program proposals before recommending them to the president of the university.

The entire university faculty totals 265. Of this number, more than 130 serve on the graduate faculty. Each academic department identifies its Graduate Faculty according to its established criteria. Faculty members are representative of many and varied institutions of higher education in both the United States and abroad. The terminal degree is held by 72 percent of the faculty. Another 335 employees make up the management and non-instructional staff.

Inquiries and communications concerning the graduate school and its degree programs may be directed to the following office telephone numbers:

Dean of Graduate Studies	570-422-3536
Toll Free	1-866-837-6130
Biology	570-422-3725
Computer Science	570-422-3666
Early Childhood and Elementary Education	570-422-3356
General Science	570-422-3341
Health (including MPH)	570-422-3702
Health and Physical Education (including Cardiac Rehab)	570-422-3106
History	570-422-3286
Political Science	570-422-3286
Professional and Secondary Education	570-422-3363
Reading	570-422-3416
Special Education	570-422-3558
Speech Language Pathology	570-422-3247

Graduate School Office and Services, 570-422-3536 or

toll free 1-866-837-6130



The graduate school office is located on the second floor of Rosenkrans Hall, West, between Stroud Hall and the Abeloff Convocation Center.

The office provides important services to graduate students: (1) receives and processes applications for admission; (2) maintains a supply of graduate school literature; (3) counsels students in graduate procedures;

(4) refers students to appropriate academic advisers on matters of program development; (5) interprets the guidelines for admission to the graduate school and the fulfillment of graduate requirements; (6) evaluates transfer credits and certifies the validity of program changes; (7) maintains academic records of all graduate students; (8) maintains and amends plans of study; (9) provides verification of students' status for academic and professional purposes; (10) coordinates the processing, selection, and payment of graduate assistants; (11) makes available and approves thesis guidelines, setting forth the scholarly standards for thesis preparation; (12) reviews theses for final approval.

Telephone or mail-in registration is quick and convenient. The graduate school distributes advance notice of course offerings three times a year: *Fall Semester, Spring Semester, and Summer*. To insure that students receive these publications, they are requested to keep the graduate school office informed of their latest mailing address.

Stricter Requirements May Apply

The regulations and requirements stated in this catalog are minimum requirements governing the graduate school as a whole and must be adhered to and fulfilled by all graduate students in all programs. The graduate faculty in individual degree programs may establish additional regulations and requirements beyond the minimums.

Accreditations

East Stroudsburg University is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, 215-662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Commission on Recognition of Postsecondary Education.

The Master of Public Health Program in community health education is accredited by the Council on Education for Public Health (CEPH).

The East Stroudsburg University graduate school is accredited by the Pennsylvania Department of Education, with program approval for certification as a reading specialist, special education supervisor, and elementary and/or secondary principal.

Approvals

All of the education programs offered by East Stroudsburg University's graduate school are approved by the Pennsylvania Department of Education, including certification as a reading specialist, special education supervisor, and elementary and/or secondary principal.

The Chemistry program is approved by the American Chemical Society.

The Early Childhood Education program is approved by the National Association for the Education of Young Children (NAEYC).

The Elementary Education program is approved by the Association for Childhood Education International (ACEI).

The Athletic Training program is accredited by the Commission on Accreditation of Allied Health Education Programs in Collaboration with the National Athletic Trainers Association.

The M.S. in Speech-Language Pathology is accredited by the American Speech-Language-Hearing Association (ASHA).

Location

East Stroudsburg University is nestled in the foothills of the Pocono Mountains. The combination of quiet woodlands, mountain streams, and refreshing clean air has

made the Poconos famous as a resort area for over 100 years.

Because of the university's location, students take advantage of the many scenic, historic, and recreational sites, including the Delaware Water Gap, Bushkill Falls, and the Pocono ski areas. In addition, the area offers fine restaurants, high quality entertainment, and excellent shopping.

Situated on a hill facing Prospect Street in the community of East Stroudsburg, the university is characterized by large areas of grassy expanses comfortably shaded by a variety of towering trees.

The campus is located approximately 75 miles west of New York City, 85 miles northeast of Philadelphia, 40 miles southeast of the Wilkes-Barre/Scranton area, and 40 miles northeast of the Allentown/Bethlehem/Easton area. Both students and faculty alike enjoy the opportunities and advantages of visits to the metropolitan areas.

The university, which is located approximately one-quarter mile from the East Stroudsburg exit of Interstate Route 80 (exit 51) is within easy reach of major highway systems and commercial air services.

Directions

From Syracuse, N.Y. and points north:

I-81 South to I-380 East to I-80 East, to exit 51.

From other points in upstate N.Y. :

I-84 West to Matamoras, PA., Exit 11 to 209 South to East Stroudsburg.

From Boston, M.A. and points northeast:

I-95 South to I-80 West, to exit 51.

From Washington, D.C., and points

southwest: I-95 North to I-83 North to I-81 North to I-80 East, to exit 51.

From New York City and points east:

George Washington Bridge to I-80 West, to exit 51.

From Philadelphia, P.A. and points

south: Northeast Extension of the Pennsylvania Turnpike to Route 22 East to Route 33 North and I-80 East, to exit 51.

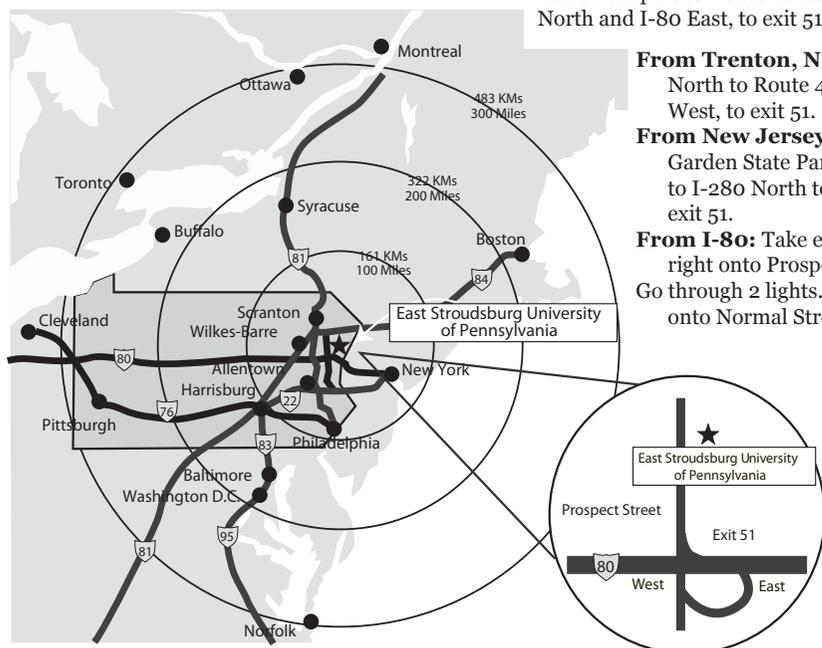
From Trenton, N.J.: Route 31 North to Route 46 West to I-80 West, to exit 51.

From New Jersey Shore area:

Garden State Parkway North to I-280 North to I-80 East, to exit 51.

From I-80:

Take exit 51. Turn right onto Prospect Street. Go through 2 lights. Turn right onto Normal Street.



Admission 570-422-3536 or toll free 1-866-837-6130

How to Apply

- Submit an Application for Admission to the Graduate School Office.
- A \$15 application fee is to accompany the admission application in the form of a check or money order made payable to “East Stroudsburg University.” The application will not be considered without the application fee. The application fee cannot be waived.
- Submit one official transcript of all undergraduate work (including transfer transcripts) by the deadline indicated below. If your undergraduate college will not issue official transcripts directly to you, have transcripts forwarded directly to East Stroudsburg University, Graduate School, East Stroudsburg, PA 18301-2999.
- Graduate Record Examinations (GRE’S) are required *only* for health programs, biology programs, and the speechpathology and audiology program.
- *International Students Only:* A statement and documentation of financial resources and a TOEFL score of at least 560 on the paper test or 220 on the computer test must be submitted before the application for admission is considered for processing. A graduate assistantship without other financial resources is not considered financial certification. The Test of English as a Foreign Language (TOEFL) score should be submitted directly from the Educational Testing Service, Princeton, New Jersey. Our Institutional Code Number is 2650.

When to Apply

U.S. Citizens or Permanent Residents: To insure admission prior to the beginning of the semester, please submit application accompanied by all needed transcripts within the following timelines:

Submit application by:	To start classes in this semester:
July 31	FALL (September)
February 1 Rehabilitation	Speech-Language Pathology and Cardiac
Nov. 30	SPRING (January)
April 30	SUMMER (June)

International Student Deadlines

March 1	for the following FALL (September)
July 1	for the following SPRING (January)
January 1	for the following SUMMER (June)

Notification of Admission

Applicants to the graduate school will be notified of our admission decision within 5 to 7 weeks after all application materials are received. Admission categories are described below.

If a student who is a U.S. citizen or permanent resident wishes to register for courses before receiving an admission letter, he or she may do so two days after we receive an application. However, if a student registers for courses *before* receiving an admission letter, he/she runs the risk of taking courses and not being admitted into a program.

If after *two years*, the student has not completed the admission process or has not enrolled, the student's admission materials will be discarded. Further enrollment will require resubmission of all materials.

Admission Categories and their Requirements

Admission with Full Graduate Standing

- Bachelor's degree from an accredited college or university.
- Undergraduate major or its equivalent in the field of proposed graduate study.
- An undergraduate minimum quality point average of 2.50 (4.00 basis) and a 3.00 in the area of specialization.

Admission with Conditional Standing

- If the applicant does not meet requirements 2 and 3 under admission with Full Graduate Standing, he/she may be granted conditional admission. Continuation of Graduate Study is dependent upon satisfactory completion of stated deficiencies, the achievement of a 3.0 average, and the filing of an acceptable Plan of Study.
- Deficiencies are stated at the time of admission to a degree program. They may be corrected by taking (a) required undergraduate or graduate courses, (b) comprehensive examinations, or (c) auditing of specific courses.
- The student is required to fulfill all deficiency requirements in his/her program and to have achieved a 3.0 quality point average in his/her graduate work by the time he/she has completed 18 graduate credits. At this time, Full Admission is achieved when the Plan of Study is submitted and approved.

Admission to Non-Degree Status

- An applicant for admission to the graduate school may select "non-degree status" in order to take graduate courses for personal improvement. The admission requirement for non-degree status is fulfilled by the student signing the application certifying the possession of a bachelor's degree. An application fee is required. **Transcripts are not required for non-degree applicants, except for application to the school nurse program.**
- A student taking courses in the non-degree status who wishes to change to a degree program must write a letter requesting admission to the degree program and have one official transcript of all undergraduate courses, including transferred courses, sent to The Graduate School. The student is subject to the then current requirements for admission to the degree program. At this time, all completed graduate courses are reviewed by the department for their applicability to the student's chosen program.

International Students 570-422-3470 or 422-3164

Persons who are not United States citizens or resident aliens (permanent residents or “green card” holders) must apply as international students according to the application deadlines indicated previously and on the Application for Admission. To apply, international applicants must do the following:

- Submit an International Student Application to the graduate school.
- Application Fee. Send a check or money order in US Dollars for exactly \$15.00 (no more, no less) made out to East Stroudsburg University. This fee cannot be waived and must accompany the application form.
- Submit a Financial Certification form accompanied by an income tax form, pay receipts, or a letter from an employer showing annual salary and a letter outlining expenses and assets. Bank statements may *only* be used to supplement documentation on earnings. If persons other than the applicant will assist in meeting expenses, financial documentation from that person must also be included. International students are eligible to apply for graduate assistantships; however, the assistantship cannot be considered as part of the support on their financial certification, unless a letter of commitment from the department offering the assistantship accompanies the financial certification form.
- Official Transcripts. Arrange to have one official transcript in certified English translation sent directly to the graduate school from your undergraduate college or university—this transcript must show the date on which your undergraduate degree was awarded—and from any other college or university whose credits you hope to transfer to ESU
- Take the Test of English as a Foreign Language (TOEFL) and request that the Educational Testing Service in Princeton, New Jersey, forward the score to the Graduate School, East Stroudsburg University, 200 Prosepect St., East Stroudsburg, PA 18301-2999. The minimum score for admission is 560 on the paper test or 220 on the computer test.

Those exempt from submitting TOEFL scores include applicants

- Who were raised in a country in which English is the native or official language; or
- Those who graduated from a university in an English-speaking country in which all instruction is given in English.
- All other international applicants must submit TOEFL scores.

Resident Alien Applicants should apply as all other American students with the following possible exception: the applicant must take the Test of English as a Foreign Language and have the results forwarded to the ESU Graduate School if:

- The applicant was raised in a country in which English is not the native or official language; and
- The applicant did not graduate from a university in an English-speaking country where all instruction was given in English.

Visas

International students should apply early so that information necessary for the preparation of the documents required for visa application can be secured and processed. International applicants may contact the Office of International Programs and Student Exchange regarding their I-20, visa, arrival, or orientation at 570-422-3470.

Housing

All international students (except those attending with spouse or children) may live on campus in an ESU residence hall and eat in the university dining room OR they may live off campus. However, students choosing to live off campus are responsible for finding their own housing, although some assistance from Commuter Student Services is available.

Undergraduate Students Admitted to a Graduate Course

An ESU undergraduate student may be allowed to take a graduate course provided the following criteria are met: 1) satisfaction of the quality point requirements for admission with a full graduate standing, i.e., 3.00 QPA in the major and 2.5 QPA overall; 2) verification of having senior class status (completion of 96 credits); 3) approval by the instructor before requesting dean's signature; 4) and approval of the Dean of the Graduate School. All appropriate signatures must be secured prior to registering. Approval to Enroll cards may be obtained in the Registrar's Office or the Graduate School Office.



Fees and Deposits, 570-422-3204

Summary of University Fees Per Semester (2000-2001 Fees)

(Subject to Change without Notice)

Recurring Fees

Basic Fees

Full-Time, Pennsylvania Residents (9-15 Semester Credit Hours)	\$2,069.00
Full-time, Pennsylvania Residents taking more than 15 semester hours pay this additional fee per semester hour	\$230.00
Part-time, Pennsylvania Residents taking fewer than 9 semester hours pay at the following rate per semester hour	\$230.00
Full-time, out-of-State Residents (9-15 Semester Credit Hours)	\$3,504.00
Full-time, Out-of-State Residents taking more than 15 semester hours pay this additional fee per semester hour	\$389.00
Part-time, Out-of-State residents taking fewer than 12 semester hours, pay at the following rate per semester hour	\$389.00

General Fee

Mandatory fee for full-time student	\$385.00
Mandatory fee for part-time student, per semester hour	\$ 42.80

Summer Sessions Fees 2001 (subject to change without notice)

Basic Fee

Pennsylvania Resident	per semester hour	\$230.00
Out-of-State Resident	per semester hour	\$389.00

General Fee	per semester hour	\$42.80
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Room Fees

For room fees call Residence Life, 570-422-3138

Board Fees

Residence hall students may choose the 19- or 15-meal plan. Apartment students may choose any or none. Students who reside in town or commute may also sign up to

eat meals in the university dining hall at the rates below. A student may make meal plan changes during the first two weeks of the semester only.

All meal plans include \$100 flex. Unused flex dollars will carry over from Fall to Spring semester; however, they do not carry over to the next academic year. Unused flex dollars lapse to the university at the end of each spring semester.

ANY 19 meals (Mon.-Fri.; Breakfast, Lunch & Dinner; Sat. & Sun.; Brunch & Dinner)	w/100 Flex dollars	\$763.00
ANY 15 meals	w/100 Flex dollars	\$736.50
ANY 10 meals	w/100 Flex dollars	\$599.00
ANY 5 meals	w/100 Flex dollars	\$458.00

Non-Recurring Fees

Application Fee (non-refundable) \$ 15.00

ESU Record Transcript Fee (after first) \$ 2.00

Late Registration Fees

Late Request for Schedule \$ 25.00
(Charges apply to students who were registered for and completed the previous academic semester.)

Late Payment of Fees \$ 25.00
(Charges apply to those who fail to make payment by the due date indicated in billing instructions.)

Bad Check Fee \$ 25.00

This is a handling fee assessed for all checks drawn in payment of fees that are not honored due to insufficient funds.

Identification Card Fee \$ 10.00

This is a permanent card which is validated each semester for use of the library, dining hall, student activities, and student identification. Lost or damaged cards will be replaced at a cost of \$8.50.

Thesis Binding (changes annually): four copies required at \$16.00 per copy \$64.00

Graduation Fee (non-refundable) \$10.00

Damage Charge

Students are held responsible for damage, breakage, loss, or delayed return of university property. Damages that are determined to be communal will be pro-rated in accordance with university policy and housing contract agreement. Deliberate disregard for university property will also result in disciplinary action.

All keys to university rooms are university property and are loaned to students. Students who do not return keys will be charged a lock replacement fee to be determined by the institution. Loss of a room key should be reported immediately.

Insurance for Graduate Students, 570-422-3463

Insurance for graduate students is available for *full-time*, United States citizens through the Office of the Vice President for Student Affairs, located in the Reibman Administration Building. International students must go through the International Program Coordinator at (570) 422-3470.

Guidelines to Determine Resident Status of Students, 570-422-3485

(Title 22 Pennsylvania Code, Section 153.1)

A student is classified as a Pennsylvania resident for tuition purposes if the student has a Pennsylvania domicile. A domicile is the place where one intends to and does, in fact, permanently reside. Because this decision is subjective, documentary evidence must be submitted to the Comptroller for consideration (570-422-3485).

Students who believe that they are qualified for in-state residency and those who would like to be made aware of the necessary factors to make such a transition should contact that office. Each case will be decided on the basis of all facts submitted with qualitative rather than quantitative emphasis in support of the intention of the student to reside indefinitely in Pennsylvania.

If the student is not satisfied with the decision made by the Comptroller in response to the challenge, the student may make a written appeal to the Office of the Chancellor, State System of Higher Education, Dixon University Center, 2986 North Second Street, Harrisburg, PA 17110. The decision on the challenge shall be final.

Detailed Information on Fees

General Fee

This *mandatory fee* is used to support the University's academic programs and a variety of on-going student services and activities such as student organizations, health services and wellness programs, and Student Center debt service, capital replacement, and maintenance. This fee is charged to *all students* (undergraduate and graduate, full-time and part-time, residential and commuting/off-campus) during all university sessions (including Intersession and Summer Sessions), and at all course locations (including internships, student teaching, University Center in Harrisburg, and all other off-campus sites). Refunds of the General Fee during regular and special sessions will be processed in accordance with the same schedule and policy as tuition refunds.

Payment Information

It is requested that a cashier's check or money order covering the balance due be written to **East Stroudsburg University**. All post office money orders must be payable to **East Stroudsburg University**.

Do not submit checks in excess of the amount due as the university is legally unable to cash them or refund balances. Postdated checks are *not* accepted.

Delinquent Accounts

No student shall be enrolled, graduated, or granted a transcript of records until all previous charges have been paid.

Refund Policies, 570-422-3204

Refunds are not automatic. Requests for refunds must be submitted in writing to Student Accounts not later than one month after the date of official withdrawal.

Tuition

The date when students submit a completed drop card to the Registrar's Office to cancel their registration or to withdraw from a course determines their eligibility for a refund.

A student who submits to the Registrar's Office an officially approved withdrawal form prior to the beginning of any semester is eligible for a complete refund of all fees EXCEPT the application fee and registration and room deposits. (Please refer to refund policies that pertain to housing and meal refunds, if applicable.)

A student who withdraws after the beginning of a semester and who submits to the Records Office an officially approved withdrawal form is entitled to a refund of tuition according to the schedule as follows (Subject to change):

	Refund (%)
First week:	90%
Second week:	80%
Third week:	70%
Fourth week:	60%
Fifth week:	50%
Sixth week and after:	No refund due

Room and Board refunds are pro-rated weekly according to the actual usage of services.

Meals

A student who officially withdraws after the beginning of a semester and who notifies the Student Accounts section of the Business Office will be entitled to a refund of the board paid for the remainder of the semester. A student who withdraws during a week will be charged for the entire week.

Summer Session

Refunds of fees for a student who withdraws after the beginning of a summer session will be determined by the proportion of the term attended and will be pro-rated on the basis of the refund policy in effect for a regular session. It is the student's responsibility to complete the Withdrawal or Drop Cards. They are available in the Registrar's Office.

Financial Aid, 570-422-3340

Forms of Financial Aid for Graduate Students

- Loans
- Student Employment
- Graduate Assistantships

Student Loans, 570-422-3340

The Office of Student Financial Aid administers the Family Education Loan program available to graduate students. Applicants must complete and submit the Free Application for Federal Student Aid (FAFSA). Recipients must be enrolled for at least six credits of graduate-level class work and must maintain satisfactory academic progress. Eligibility for the Subsidized Federal Stafford Loan is determined on the basis of need as measured by the Free Application for Federal Student Aid and requires no payment of interest or principal until six months after students cease half-time enrollment (six credits per term). Unsubsidized Federal Stafford Loans substitute for the student contribution and require payment of interest only during periods of enrollment and the six-month grace period. The option of deferring these interest payments through capitalization is available. Interest rates are adjusted each year. Graduate students doing graduate level coursework may borrow up to \$18,500 per year with the first \$8,500 being subsidized, if eligible, and the balance being unsubsidized. Graduate students enrolled in undergraduate level coursework should contact the Office of Student Financial Aid to determine eligibility. Total borrowing amounts for the loan term, however, cannot exceed the cost of education less other financial assistance.

Student Employment, 570-422-3340

The Office of Student Financial Aid administers the University Student Employment Program, which provides an opportunity for students to earn money for personal expenses. Students usually work ten hours per week. Students applying for University Student Employment must complete the Free Application for Federal Student Aid (FAFSA) and should check “yes” to question #36.

Graduate Assistantships, 570-422-3536 or toll free 1-866-837-6130

The Office of Graduate Studies and Research administers the Graduate Assistant program. Graduate assistantships are available for all graduate degree programs and in various campus offices. Stipends range from \$2,500 to \$5,000 for the academic year, plus a waiver of tuition. Summer assistantships are also available; however, only Cardiac Rehab students can *begin* an assistantship in the summer. The average graduate assistantship is worth approximately \$10,000 per year.

The graduate assistantship is in part a merit scholarship and in part a job. You must

work from 10 to 20 hours a week in an academic department or a campus office. Graduate assistantship assignments vary but may include research, lab work, and administrative responsibilities.

How to Apply for a GA

Fill out an application for a graduate assistantship and return it to the Graduate Office. To be eligible, you must be admitted into a graduate program with at least a 2.5 overall undergraduate GPA and a 3.0 in the major and be registered as a full-time student. *Please note: Meeting these criteria does not mean you are awarded an assistantship.* You must take additional steps and some departments have higher GPA requirements. After you receive your letter of admission, check the Graduate Office door for an updated list of GA openings. Call the contact person provided to arrange for an interview. If the contact person selects you, he or she will send a recommendation to the Graduate Dean who will check your eligibility. If the Dean approves the appointment, you will be sent a graduate assistant contract as soon as possible.

For additional information, call the graduate school at 570 422-3536. For information on Residence Hall Graduate Assistantships, call 570-422-3138.

Financial Aid Handbook

The Office of Student Financial Aid offers a copy of its *Financial Aid Handbook* to prospective graduate students. This booklet explains in greater detail the regulations and process required in order to determine eligibility for loans and University Student Employment programs. Counseling services are also available to both enrolled and prospective students. Located in Rosenkrans East, the Office of Student Financial Aid office hours are Monday through Friday, 8:00 a.m. to 4:30 p.m. (4:00 p.m. during the summer). To schedule an appointment or obtain more information, call 570-422-3340 or 1-800-ESU-OSFA.

All requests for information and counseling appointments should be directed to:

Office of Student Financial Aid
Rosenkrans East
East Stroudsburg University
200 Prospect Street
East Stroudsburg, PA 18301-2999
570-422-3340 800-378-6732

Academic Policies

General Regulations

Course Credit

Course credit is measured in semester hours. A semester hour represents academic work equivalent to one hour per week in class plus two hours per week of outside studying for a semester. Class periods at East Stroudsburg are generally 50 minutes in length and are regarded as class hours. A semester is 15 calendar weeks. A semester hour of credit is also equivalent to one week of full time study whether in class or outside of class. In some courses, two hours of laboratory per week for a semester earns one semester hour of credit while in other courses three hours of laboratory or field work per week for a semester earns one semester hour of credit.

- The first number shows the credit in semester hours.
- The second number shows the period of concentrated classroom instruction per week.
- The third number shows the periods of laboratory, field or other supervised activity work per week.

For example **BIOL 562 MARINE BOTANY (3:2:3)** is a course in Biology which earns 3 semester hours of credit. It meets for two periods of class lecture and 3 periods of laboratory per week for one semester.

Credit Hour Load

The maximum credit hour load for students devoting full time to their studies is 15 credit hours during a semester, seven credit hours during the main summer session, and four credit hours each during the summer pre-session and the summer post-session. Any exceptions to the maximum credit hour load restrictions must be approved by the Dean of Graduate Studies.

Full-Time Status

The minimum number of credits needed to maintain status as a full-time graduate student is 9 credits per semester during the academic year. During Summer Sessions, the minimum number is six credits for the main session and three credits each for the pre-session and post-session.

Quality Point System

A excellent	4	quality points
B good	3	quality points
C fair	2	quality points
D poor	1	quality point
E failing	0	quality points

Transfer Credits

No more than six semester credits of A or B grades completed at another graduate school may be transferred and applied to a graduate degree program at East Stroudsburg University. Graduate courses transferred from another university must be acceptable in our graduate degree program

To have transfer credits applied to your program and placed on your transcript:

- The transferred course(s) must be listed on the Plan of Study which contains approval signatures of your adviser, graduate coordinator, and the dean of graduate studies; and
- An *official transcript* of the transferred courses must be forwarded to the Graduate School Office, 218 Rosenkrans West, East Stroudsburg University, East Stroudsburg, PA 18301-2999.
- However, at the discretion of the degree program department with the approval of the Dean of Graduate Studies, credits may be accepted to satisfy deficiencies in special subject matter even though they do not meet the criteria for transfer to the graduate course work of the degree program.

Graduate School Continuing Education or In-Service Courses

Graduate students may be granted approval to include in their programs of study up to six credits of workshops or in-service course work that are sponsored and authorized by East Stroudsburg University. Approval for the inclusion of such credit in a graduate program is required before taking the course and is dependent upon approval of each student's individual program.

Academic Dismissal (pending final approval)

Graduate students at East Stroudsburg University are expected to maintain high academic standards. Students failing to make satisfactory progress are subject to academic dismissal. Individual programs may have more stringent requirements than those listed below.

First Notice: Upon receipt of the first grade below B in a graduate course, the student will receive a "letter of academic warning" from the Graduate Dean, with a copy forwarded to the student's graduate coordinator.

Second Notice: Upon receipt of the second grade below B in a graduate course, the student will receive a "letter of academic probation" from the Graduate Dean, with a copy forwarded to the student's graduate coordinator. In cases where the student has received more than one grade below B in the same semester, academic probation will be imposed without "academic warning."

Removal from Probation: A student may be removed from probation by repeating a course or courses in which the original grade is less than B. A repeat course grade will replace the original grade. A maximum of six semester hours of credit may be repeated.

Dismissal: Upon receipt of the third grade below B, the student shall be dismissed from the graduate school. The Graduate Dean will write a letter of academic dismissal, with copies to the student's graduate coordinator, the Chairperson of the academic department, and the Registrar of the university. This dismissal will occur upon receipt of the third grade below B even in those cases where the first, second, and third grades below B were awarded within the same semester.

Appeals Process: A student who has been academically dismissed may appeal this decision in writing to the Dean of Graduate Studies and Research. Documentation of extenuating circumstances (student illness, death in the family, etc.) *must* be included. The Dean's decision is final.

Disciplinary Procedures (nonacademic)

A graduate school disciplinary procedure document governing nonacademic matters is available at the Graduate School Office, Rosenkrans Hall.

Graduate Records Policies

Changes of Registration

A student's course schedule should be regarded as a contract. Courses may be added during the first ten (10) class days (first four days of summer sessions) of the semester by completing an appropriately signed Approval to Enroll card and filing the card in the Registrar's Office. All changes in course enrollments must be approved by the Dean of the Graduate School.

Application for Graduation

Qualified degree candidates must submit the application for graduation with the required signatures and a check for the graduation fee to the Graduate School Office within the following time frame:

<i>Expected Graduation</i>	<i>Apply Between</i>
Spring Semester (May)	Dec. 1 - March 1
Summer Sessions (August)	April 1 - June 15
Fall Semester (December)	July 1 - October 1

Because this information is used for the graduate diploma, the graduate school requests that the application form be typed to avoid any errors.

Registration, Transcripts, and Grades, 570-422-3537

To register for courses, request ESU transcripts (must be in writing or in person), or to check on grades, contact the Office of the Registrar, Reibman Administration Building, East Stroudsburg University, East Stroudsburg, PA 18301-2999.

Policies Governing Graduate Courses

Attendance

Each professor will place the attendance policy on file in the departmental office, and make this policy known to each class. Where non-compliance with policy occurs, the professor has the right to assign a grade consistent with the policy. The Office of the Registrar will notify instructors of unusual circumstances of health or family problems if known and if the absences are in excess of one day.

Auditing Courses

Auditing is permitted *only* if the student has been admitted and has registered and paid the regular fees for the course. A student must complete a Permission To Audit card and secure the signature of the professor of the course. A change of registration from credit to audit or from audit to credit may occur only during the first week of the semester. Auditing students pay the same tuition and fees as students taking courses for credit.

Incompletes

The maximum time period for completing course requirements to remove incomplete grades is two years from the end of the session in which the I grade was assigned. After that time, an incomplete grade can be removed from the record only by registering for and completing the course with a grade of A, B, C, D, E, P, or F.

Withdrawals

Course withdrawals, subject to the following conditions, may be accomplished by completing a drop card, obtaining the instructor's signature, and filing the card at the Registrar's Office. *Any student who discontinues attendance in a course without formally withdrawing will be assigned a final grade of E.*

During the first week of the semester a student may withdraw from a course and have no record of that course appear on the student's permanent record. After the first week, through the tenth week, a student who withdraws will receive a grade of W for that course on the student's permanent record. After the tenth week the student may withdraw only if there are extraordinary circumstances (e.g., illness, death in the family, etc.). In this situation the student must also secure the Graduate Dean's signature on the drop card. A grade of W will be assigned if the student is passing; Z will be assigned if the student is failing.

Time periods for withdrawals during a regular semester, quarter session, and summer sessions:

<i>Type of Action</i>	<i>Regular Semester</i>	<i>Quarter Sessions</i>	<i>Summer Sessions</i>	
			<i>3 Weeks</i>	<i>6 Weeks</i>
No record	1st week	3 days	1st day	2 days
W grade	2nd to 10th weeks	4th day to 5th week	2nd day to 2nd week	3rd day to 4th week
No withdrawal*	11th to 15th weeks	6th to 7 1/2 weeks	3rd week	5th and 6th weeks

*Except for extraordinary reasons

Degree Regulations

Advisers

The chairperson of the department of each graduate program will assign each graduate student an adviser from among the faculty designated for that program. The adviser will (1) direct the student in the formulation of his/her plan of study, (2) approve course selections and course changes, (3) give guidance relative to examinations for the program, and (4) ascertain that the candidate is meeting the requirements for the degree or certificate. **The assignment of an adviser does not relieve the student of the primary responsibility for adequate program planning and for progress toward completion.**

Degree Candidacy

The following policies govern the acceptance of a graduate student as a degree candidate:

- Admission with full graduate standing.
- Completion of at least six and not more than eighteen semester hours of graduate study at this university and a quality point average equal to or greater than that required for graduation in the particular degree program in which the student desires candidacy (see Requirements for Master's Degree). Credits completed in excess of eighteen semester hours before applying for degree candidacy (submitting Plan of Study, see below) will not be accepted for inclusion in a degree program except upon written approval and specification of courses by the department chairperson and dean of graduate school.
- Indication of a choice of the thesis or the non-thesis degree program. A thesis topic must be approved prior to application for degree candidacy and submission of the Plan of Study.
- Application to the Graduate School Office for degree candidacy accomplished by completing and submitting an application for candidacy and plan of study for master's degree form (available from the graduate coordinator or the Graduate School Office) indicating all courses to be taken for the degree, including deficiencies established upon initial admission, and approved by the adviser, the graduate coordinator, and the dean of the graduate school. Subsequent changes in an approved program must be submitted on an amendment to the plan of study form available from and approved by those mentioned above.
- Approval of the above application by the adviser, graduate coordinator, and dean of the graduate school is required. Minimal satisfaction of quantitative requirements does not guarantee approval of degree candidacy.
- Official transcripts of transfer credits must be submitted to the Graduate School Office when courses taken at other graduate schools are included in the degree program (a maximum of six semester hours—see transfer credit). The last course must be taken at East Stroudsburg University unless prior approval is given by the dean of graduate studies.

Plan Of Study

Upon completing 6-18 credits, a plan of study should be submitted through the student's adviser and department graduate coordinator. The form can be obtained from the graduate coordinator or the Graduate School Office. It is at this time that any transfer

credits are included on the Plan of Study. **An official transcript from the university from which the credits are to be transferred is required in the Graduate School before the transfer credits can be added to the ESU transcript.**

Requirements for the Master's Degree

- Admission to degree candidacy.
- Candidates for the Master of Arts, Master of Education, Master of Public Health and Master of Science degrees must achieve a 3.0 quality point average (on a 4.0 scale) in all courses taken in the graduate school.
- Completion of a minimum of twenty-four semester hours for those students in a thesis program and a minimum of thirty semester hours for those students in the non-thesis program plus any additional requirements as determined by the department.
- Completion of the degree program within a six-year period. Courses taken over six years prior to the time of completion of all degree requirements may not be accepted as part of a degree program. Exceptions to this time limit must be specifically petitioned to the graduate coordinator with approval by the dean of the graduate school.
- Satisfactory completion of a written comprehensive examination in the major field (when required) during the term in which the student completes the course work leading to the degree except by special arrangement with the department chairperson.
- Satisfactory completion of a final oral examination (when required).
- Completion and approval of the thesis or individual research project. (See Coordinator for thesis guidelines.)
- If applicable, satisfaction of the foreign language or research tool requirement.

Research Requirement-Thesis or Problem

The thesis candidate conducts a highly formalized research effort to examine a belief or to test a hypothesis. The research demands comprehensive understanding of the defined problem and requires expert knowledge, powers of scholarship and writing skills.

The non-thesis candidate conducts an applied research study. The design is restricted to a practical problem in an operational setting. This research requires expert knowledge of research, methods of inquiry and command of the written language.

The graduate student in a degree program is expected to register for Course 570, Introduction to Research, in the major field during the first term of enrollment following admission to the degree program. This course orients the student to graduate study and research in the major field and provides an opportunity for planning specific deadlines and procedures for completing the requirements for a master's degree.

The graduate school *Thesis Guidelines* are available through the graduate coordinator. The student should ask their individual graduate coordinator for specific departmental thesis guidelines. All theses copies should be submitted to the Graduate School Office in binding quality at least **Two Weeks Before Graduation** to ensure fulfilling degree requirements; however, the final deadline is the Wednesday before graduation.

Comprehensive Examinations

A degree candidate may be required to take a comprehensive written examination in the major field not earlier than the term in which he/she completed the coursework

approved in the degree plan of study. In special cases, a student may petition the department to take the comprehensive examination after completion of eighteen semester hours and achieving degree candidacy.

The comprehensive examination includes the areas of general and professional education as well as the field of specialization, although major emphasis will be on the latter.

The candidate who fails a comprehensive examination may petition the department for a re-examination. A failure eliminates the student from the degree program unless re-examination is granted.

The various faculties offer comprehensive examinations on the following days:

The first Saturday in November

The first Saturday in March

The second Saturday in June

It is the student's responsibility to notify the chairperson of the department and his/her adviser at least one month prior to the date on which the student plans to take the examination.

Oral Examinations

Most of the degree programs require degree candidates to take an oral examination in the last term of residence. Re-examination of a candidate following an unsatisfactory oral examination is at the discretion of the examining committee and at a time and under such circumstances as they may prescribe.

For candidates in a thesis program the examination is primarily related to the thesis although other areas pertinent to the degree program may be examined. The examining committee may make recommendations for changes or alterations in the thesis.

For the candidate in a non-thesis program the examination is primarily related to the subject matter covered in the courses in the degree program although the committee may also examine in the area of the candidate's individual research project.

The oral examination is scheduled by the candidate and his/her adviser through the department chairperson and the appropriate faculty. **All oral examinations must be scheduled at least two weeks in advance of the exam day, and must be completed not later than two weeks preceding the candidate's commencement exercises.** Examinations of thesis candidates must be scheduled to provide availability of unbound thesis copies for the committee at least five weekdays prior to the examination.

This examination must be scheduled so that four copies of the thesis, ready for binding and with final approval by the examining committee, are submitted to the graduate school office no later than the Wednesday preceding the candidate's commencement exercise.

Services for Graduate Students

Career Planning and Placement Services, 570-422-3219

Career planning and placement services are offered without charge to all students and alumni. ESU graduate students are invited to contact the office to discuss career or job search plans and to establish a file, including a resume and information of interest to prospective employers. The Career Resources Center is located on the second floor of the University Center. For additional information, visit the office's website: www.esu.edu/careerservices

Housing, 570-422-3460

University sponsored housing is available on a limited basis for graduate students during the academic year. Off-campus housing assistance may be obtained from the Coordinator of Judicial and Commuter Student Affairs at 570-422-3461. Early arrangement for off-campus housing is recommended. Housing is available during the summer sessions in the university residence halls.

Rose Mekeel Child Care Center, 570-422-3514

The Rose MeKeel Child Care Center is an age-appropriate program for children 2 1/2 to 5 years old. The Center is licensed by the Department of Public Welfare and accredited by the Academy of the National Association for the Education of Young Children.

The Center is housed in a two-room schoolhouse located next to Zimbar-Liljenstein Gymnasium. Staffed by a director, two teachers and undergraduate work-study students, the facility is open from 7:45 a.m. to 5:00 p.m., Monday through Friday. The facility is also open for limited enrollment during the January, March and May intersessions. A summer program is available for children 5 to 6 years old.

A non-refundable \$15.00 registration fee and a security fee, equal to one weeks tuition, will reserve a space for your child. Children of University students are charged an hourly fee of \$2.00, with a minimum enrollment in three-hour blocks no less than twice a week. Additional time is available in two-hour blocks. Faculty, Staff and Community children are charged as follows: full-time—\$100; full-time, half day—\$80.00; daily rate (more than 5 hours a day, 2-4 days)—\$22.00; daily rate (5 or less hours a day, 2-4 days)—\$18.00; drop-in student rate—\$2.50. Tuition is based on the child's enrollment for the semester and is payable monthly. Enrollment is limited. Call 422-3514 early to reserve a space.

Counseling and Psychological Services (CAPS), 570-422-3277

The Office of University Counseling and Psychological Services offers a range of counseling services to facilitate and enhance the educational, psychological, and interpersonal well-being of East Stroudsburg University students. The services provided are designed to maximize students' personal and educational functioning, to prevent and remediate emotional/social problems, to help students attain their educational goals, and to promote their professional competence. Services offered include personal counseling/psychotherapy, vocational counseling, psychological and vocational testing, developmental and outreach programming, and consultation services in individual and group formats. Anxiety, career exploration/indecision, depression, difficulties in interpersonal relationships, eating disorders, family concerns, self-doubt, sexual concerns and substance abuse are some of the issues students often address through counseling. In addition, the Center maintains a library of vocational information materials, study-skill aids, resources and guides addressing various psychological and interpersonal problems and concerns, and guides/handbooks dealing with various educational and vocational institutions. Lastly, the Graduate Record Examination (GRE), the College Level Examination Program (CLEP), the Miller Analogies Test (MAT), the National Teachers Examination (NTE), and the Certified Health Education Specialist Examination (CHES) are administered at least twice a year by the Counseling Center.

The counseling and psychological services staff are licensed psychologists and supervised professionals in graduate training. Their professional training and experience prepare them to deal with a wide range of issues faced by university students. All currently enrolled students are eligible to receive services free of charge except for the fees associated with the national exams.

All information shared by a client is kept confidential, and all client records are classified as confidential records. Without a client's written permission, no information is released to anyone outside of the center, except as required by law.

The Counseling and Psychological Services Office is located on the second floor of the Flagler-Metzgar Center. Normal hours of operation are 8:00 a.m. to 4:30 p.m. Monday through Friday. Services generally are offered by appointment and may be scheduled by stopping at the office in-person or by calling 570-422-3277. For additional information, call us or visit our web-site (www.esu.edu/caps).

Disabilities Services, 570-422-3954 V/TTY

The university is committed to ensuring equal educational opportunities for students with disabilities. Appropriate academic adjustments and program modifications will be made for those students who present documentation and request services. After admission to the university, students should call for an appointment to meet with the disability services coordinator.

In addition, individuals with mobility or medical disabilities which limit their ability to climb stairs may make an appointment via telephone with a member of the Graduate School Office, which is located on the second floor of Rosenkrans West. In order to accommodate the individual, the graduate school representative will conduct the meeting in the Office of Programs for Academic Support, located on the first floor of Rosenkrans East.

Overview of East Stroudsburg University's Graduate Programs

Master's Degree Programs

Master of Arts

History
Political Science

Master of Science

Biology*
Cardiac Rehabilitation and Exercise Science+^
Computer Science
General Science
Health Education*
Physical Education
Speech-Language Pathology*+^

Master of Education

Biology*
Elementary Education
General Science
Health and Physical Education
History
Political Science
Reading
Secondary Education
Special Education

Master of Public Health*+

*In addition to regular admission requirements, this program requires the student to take the GRE's.

+In addition to regular admission requirements, this program requires 3 letters of recommendation.

^In addition to regular admission requirements, this program requires its own application form.

Post-Baccalaureate Certificate in Education Programs

Biology (7-12)
Chemistry (7-12)
Communication (7-12)

Earth and Space Science (7-12)
 Elementary Education (K-6)
 English (7-12)
 French (7-12)
 General Science (7-12)
 Health (K-12)
 Health and Physical Education (K-12)
 Mathematics (7-12)
 Mentally and/or Physically Handicapped (K-12)
 Physics (7-12)
 Social Studies (7-12)
 Spanish (7-12)
 Speech and Language Impaired (K-12)

Other Areas of Certification

Principal Certification (Elementary and Secondary)
 Reading Specialist Certification (K-12)
 Special Education Supervisor Certification
 School Nurse Educational Specialist
 Safety Education/Driver Education Certification

More Detailed Information on Graduate Programs

Master of Arts

Faculty of Social Science

A Master of Arts Degree is awarded with a major in history or political science. Students in these programs must complete a minimum of thirty semester hours of study and a thesis. This liberal degree within the basic disciplines permits the student to formulate his/her program according to individual needs.

Master of Science

Faculty of Science and Faculty of Health Sciences and Human Performance

A Master of Science degree is awarded with a major in biology, cardiac rehabilitation/exercise science, computer science, general science, health education, physical education, and speech-language pathology. The requirements for individual programs are listed under each specific major. Students in these programs also design their course of study to meet their individual needs.

Master of Education

Faculty of Education, Faculty of Science, Faculty of Health Sciences and Human Performance, Faculty of Social Science

A Master of Education degree is awarded with a major in biological science, elementary education, general science, health and physical education, history, political science, reading, secondary education or special education. This degree is awarded upon successful completion of a minimum of thirty semester hours or additional academic activity as recommended by each department. Students take their coursework in education and the related discipline.

Master of Public Health Program in Community Health Education

Faculty of Health Sciences

A Master of Public Health degree is awarded upon successful completion of a 48 credit hour program prescribed by the Health Department. The Master of Public Health Program in Community Health Education is accredited by the Council on Education for Public Health (CEPH). East Stroudsburg University is the only one of the fourteen State System of Higher Education's institutions approved to offer this degree.

Post-Baccalaureate Certificate in Education Programs

Applicants for admission to graduate programs leading to teacher certification must apply for admission to the graduate school. Satisfactory completion of the requirements for a particular certification is determined for each student by the department sponsoring the program. Certification programs are coordinated by the departments of elementary education, reading, secondary education, and special education. Students may complete programs of study that will lead toward an Instructional I or Instructional II (permanent) teaching certificate. Eligible graduates may apply for an Instructional I certificate (provisional) which is valid for a period of six years in Pennsylvania. This certificate must be made permanent after six years of teaching.

Graduate programs are offered leading to the Master of Education degree in elementary education, special education, reading and secondary education. Graduate studies leading to reading specialist, school principal, and special education supervisor certificates are also available.

The programs offering teacher certification are listed above. Students interested in programs leading to teacher certification should review the requirements for admission to the teacher education program that are outlined in the undergraduate catalog. Students must be approved by the respective departments and meet several admission criteria, including a basic skills test, 2.5 or 2.75 cumulative undergraduate quality point average, Act 34 (criminal) and Act 151 (child abuse) clearances, etc. This information is available in all departments that coordinate certification programs.

The teacher education program is governed by the Teacher Education Council. The Council administers existing policies, develops and proposes new policies in teacher education and reviews certification programs.

Principal Certification, 570-422-3363

This program offers principal certification on both the elementary and secondary levels. An intensive internship experience is the culminating experience of the program.

Special Education Supervisor Certificate, 570-422-3558

The program of study, at the graduate level, in special education offers the Special Education Supervisor advanced certificate. Requirements for admission and matriculation in this supervisory track are described in a separate publication called the *Special Education Supervisor Certificate*. This document is available from the coordinator of graduate studies for the Department of Special Education and Rehabilitation.

Reading Specialist Certification, 570-422-3416

This applied, professional program is based upon fulfillment of required competencies which can be acquired in as few as 27 semester hours of graduate study.

Safety Education/Driver Education Certification, 570-422-3322

Degree Programs

Biology, 570-422-3716

The Graduate Faculty in biology offers two master degree programs: the Master of Science degree with a major in biology and the Master of Education degree with a major in biology. The Master of Science degree is subdivided into Biology and Biology: Management of Environmental Resources. Each of the three routes to a degree is further subdivided into three tracks: thesis, non-thesis, or non-research.

Admission requirements include the following:

- An undergraduate major in a life science (or its equivalent);
- Completion of organic chemistry (minimum two semesters);
- Three letters of recommendation;
- A letter of intent from the student; and
- GRE scores for full graduate standing.

Students applying without meeting the above requirements, but who meet all other admission requirements, may be given *Conditional Admission* until specified deficiencies are removed.

After admission, the student will meet with the academic advisor to choose a plan of study.

Students falling below a 3.0 quality average will be placed on probationary status.

The student is strongly advised to have a statistics course before initiating the thesis or the research problem.

Master of Science

Thesis Program—30 Semester Hours

Required: BIOL 572 Thesis I, 3 credits
 BIOL 573 Thesis II, 3 credits
 Major Field and Related Electives, *24 semester hours

Non-Thesis Program—31 Semester Hours

Required: BIOL 571 Independent Research Problem (Semester Hours Arranged)
 Major Field and Related Electives, *30 semester hours
 Independent Research, 1 semester hour.

Non-Research Program - 39 Semester Hours

This program of study emphasizes the broader aspects of graduate studies in biology by requiring more courses in place of the thesis or research problem.

Major Field or Related Electives, *39 semester hours.

Master of Science

Management of Environmental Resources**

A Master of Science degree with a major in biology and emphasis in management of environmental resources is available to interested students.

Thesis Program—30 Semester Hours

Required: BIOL 572 Thesis I, 3 credits
 BIOL 573 Thesis II, 3 credits
 Major Field and Related Electives, *24 semester hours
 Students may be required to participate in a field experience or internship.

Non-Thesis Program—31 Semester Hours

Required: BIOL 571 Independent Research Problem (Semester Hours Arranged)
 Major Field and Related Electives, *30 semester hours
 Independent Research, 1 semester hour.
 Students may be required to participate in a field experience or internship.

Non-Research Program—39 Semester Hours

This program of study emphasizes the broader aspects of graduate studies in biology by requiring more courses in place of the thesis or research problem.

Required: Major Field or Selected Electives, *39 semester hours.
 Students may be required to participate in a field experience or internship.

**For more information concerning the program, contact Professor Bruce Haase at 570-422-3712 or Professor Jane Huffman at 570-422-3716.

Master of Education

Thesis Program—30 Semester Hours

Required: BIOL 572 Thesis I, 3 credits
 Major Field and Related Electives, *12 semester hours
 General Education, 3 semester hours
 Professional Education, 12 semester hours

Non-Thesis Program—31 Semester Hours

Required: BIOL 571 Independent Research Problem (Semester Hours Arranged)
 Major Field and Related Electives, *15 semester hours
 Professional Education, 12 semester hours
 General Education, 3 semester hours
 Independent Research, 1 semester hour.

Non-Research Program— 39 Semester Hours

This program of study emphasizes the broader aspects of graduate studies in biology by requiring more courses in place of the thesis or research problem.

Major Field and Related Electives, *24 semester hours
 Professional Education, 12 semester hours
 General Education, 3 semester hours.

*Six semester hours in the M.S. program or three semester hours in the M.Ed. program may be earned in courses taken in related areas such as mathematics, chemistry or physics.

Cardiac Rehabilitation and Exercise Science

For Cardiac Rehabilitation and Exercise Science, see Movement Studies and Exercise Science.

Computer Science, 570-422-3772

The graduate faculty in computer science offers the Master of Science degree with a major in computer science.

Expectations for Admission

Applicants should have a B.S. in computer science from East Stroudsburg University, or, if not, the computer science skills and mathematical maturity represented by the material in the following ESU courses.

CPSC 111	Introduction to Computer Programming-& Problem Solving
CPSC 141	Introduction to Computer Organization
CPSC 151	Linear Data Structures and Elementary Algorithm Analysis
CPSC 232	Introduction to Assembler Programming
CPSC 240	Operating Systems and Computer Architecture
CPSC 251	Non-Linear Data Structures
CPSC 321	Issues in the Practice of Computer Science
CPSC 330	Programming Languages
MATH 140	Calculus and Analytic Geometry-I
MATH 141	Calculus and Analytic Geometry-II
MATH 220	Discrete Mathematical Structures
MATH 311	Statistics
MATH 320	Linear Algebra

Course descriptions are available in the undergraduate catalogue. A student may be admitted conditionally subject to successful completion of deficiencies in the above list.

Master of Science

Option I—Research Emphasis—30 Semester Hours

Programming Languages Area – Required:

CPSC 530 Software Engineering

At least one of

CPSC 531 Advanced Topics in Software Engineering

CPSC 532 Natural Language Processing

CPSC 533 Compiler Construction

CPSC 534 Compiler Construction II

CPSC 535 Parallel Computing

Operating Systems/Architecture Area – Required:

CPSC 541 Computer Architecture

At least one of

- | | |
|---|--|
| CPSC 542 | Operating Systems Design |
| CPSC 544 | Realtime Systems |
| CPSC 545 | Networks and Data Communication |
| Theory – at least one of | |
| CPSC 562 | Theory of Computation |
| CPSC 563 | Theory of Abstract Languages |
| Data/File Structures – at least one of | |
| CPSC 550 | Algorithmic Graph Theory |
| CPSC 553 | Database Systems |
| CPSC 554 | Data Structures and Algorithmic Analysis |
| Topics/Electives – at least one additional course numbered 520 or higher. | |
| Culminating Activities – Required: | |
| CPSC 570 | Introduction to Research |
| CPSC 574 | Research Project I |
| CPSC 575 | Research Project II |

Option II—33 Semester Hours

- Programming Languages Area – Required:
- | | |
|-----------------|---|
| CPSC 530 | Software Engineering |
| At least one of | |
| CPSC 531 | Advanced Topics in Software Engineering |
| CPSC 532 | Natural Language Processing |
| CPSC 533 | Compiler Construction |
| CPSC 534 | Compiler Construction II |
| CPSC 535 | Parallel Computing |
- Operating Systems/Architecture Area – Required:
- | | |
|-----------------|---------------------------------|
| CPSC 541 | Computer Architecture |
| At least one of | |
| CPSC 542 | Operating Systems Design |
| CPSC 544 | Realtime Systems |
| CPSC 545 | Networks and Data Communication |
- Theory – at least one of
- | | |
|----------|------------------------------|
| CPSC 562 | Theory of Computation |
| CPSC 563 | Theory of Abstract Languages |
- Data/File Structures – at least one of
- | | |
|----------|--|
| CPSC 550 | Algorithmic Graph Theory |
| CPSC 553 | Database Systems |
| CPSC 554 | Data Structures and Algorithmic Analysis |
- Topics/Electives – at least three additional courses numbered 520 or higher.
- Culminating Activities – Required:
- | | |
|----------|--------------------------|
| CPSC 570 | Introduction to Research |
| CPSC 574 | Research Project I |

For either option, the degree candidate must select a minimum of 18 credits of courses

Early Childhood and Elementary Education, 570-422-3356

The mission of this ESU graduate program is to prepare Master Teachers to become educational leaders who apply research and best practice theory as they make reflective and deliberate decisions that consistently support and extend the learning of all students. There are three options in the Elementary Education graduate program: 1) Master Teacher program leading to an M. Ed. (33 credits), 2) Extension of a teaching certificate to include Elementary Education (39 credits), and 3) Certification in Elementary Education for individuals holding a baccalaureate degree without teaching certification (53 credits).

Master of Education in Elementary Education

M.Ed. Entrance Requirements

To be accepted as a Master's degree candidate in full standing, applicants must have a baccalaureate degree with certification in elementary education. Applicants must have a 2.75 overall QPA and a 3.0 in the major and submit a copy of their current teaching certificate.

M. Ed. Program Requirements

The Masters of Elementary Education program (ELED) consists of a **Core** set of required courses (15 credits) and a **Concentration** area of 18 credits. The **Concentration** includes a focus of 12 elementary education credits in addition to 6 credits of Education Electives that are chosen to meet the student's professional needs and personal interests. The 18 credits in the concentration are selected by the graduate student in collaboration with the ELED graduate coordinator. The Master of Education Program is guided by the *ESU Advanced Teacher Education Conceptual Framework*.

Core courses present research-based concepts related to teaching and learning as well as introduce various tools of inquiry. Concentration courses extend the master teacher's ability to articulate, apply and adapt theoretical constructs to the classroom setting. At the end of graduate course work the master teacher candidate will be able to demonstrate reflective, collaborative, and creative teaching practice and professional leadership qualities.

Core Courses: 15 credits required

ELED 502	Psychology of the Elementary School Child
ELED 592	Elementary Curriculum
ELED 570	Intro to Research
ELED 575	Graduate Seminar
MCOM 510	Computers in Education

Concentration Courses: 18 credits required (12 in Focus and 6 in Electives)

Focus: The student shall, in consultation with his or her adviser, complete 12 ELED graduate credits in one of the following focus areas:

- Language, Literacy, and the Arts Focus Area
- Mathematics, Science and Technology Focus Area
- The Individual, School, and Culture Focus Area
- Student Designed Focus Area

Electives: In addition, the student shall complete 6 graduate credits of electives.

Other Requirements:**Plan of Study**

Between the completion of 12-15 semester hours, students will complete a Plan of Study in consultation with the ELED graduate coordinator.

Comprehensive Evaluation

Students select one of the following exit criteria to complete an M.Ed.: Professional Portfolio, Curriculum Project, or Action Research. The planning and development of the Comprehensive Evaluation is an integral part of ELED 575, a course taken between 24-27 credits.

Workshop Courses*

A student may have a maximum of 9 credits of workshop courses included in a Plan of Study

Extension of Teaching Certification**To Include Elementary Education**

The Elementary Education Certification Program is open to individuals who have successfully completed an undergraduate degree and who are certified in an area other than elementary education (e.g., special education, secondary education). The Certification Program consists of 39 credits and offers the option of taking courses at the undergraduate or graduate level. Some courses taken at the graduate level may be applied toward a master's degree in elementary education. All requirements, the department screening, and coursework must be completed prior to receiving certification in elementary education. The Certification Program is guided by the *ESU Advanced Teacher Education Conceptual Framework* and consists of specific ELED certification courses.

Entrance Requirements

Candidates for this program are admitted through the graduate school and adhere to graduate standards. Entrance requirements include the following: 1) a minimum quality point average of 2.75 overall and 3.0 in the major field of study and 2) a copy of current certification. After acceptance, candidates must meet with the ELED graduate coordinator for specific program advisement.

Program Requirements

Undergraduate requirements - Applicant's undergraduate degree program is reviewed to see if the student meets the General Education requirements (minimum of 50 semester hours distributed in arts and letters, natural, and social sciences) and to see whether any previously taken education courses may apply.

Department Screening - The screening process will be discussed during advisement with the graduate coordinator. This is an essential first step in the completion of the program.

Professional Field Experiences - One week of supervised field experience in an elementary classroom coordinated by the ELED Department and overseen by the graduate coordinator.

Certification Courses

Professional Education - 9 semester hours

PSED 242 Educational Psychology	or	PSED 516 Learner and the Learning Process
PSED 161 Foundations of Education Community	or	PSED 510 Teacher and School
MCOM 262 Educational Communications Utilization of Classroom	or	MCOM 520 Selection and Instructional Media for the

Elementary Education - 30 semester hours

ELED 132 Child Growth and Development:

(Prerequisite for all other Elementary Education courses)

ELED 351 Music in Childhood Education		
ELED 311 Art in Childhood Education	or	ELED 512 Integrating the Arts in Elem Sch
ELED 342 Language Arts in Childhood Ed	or	ELED 520 Current Trends in Lang Arts
ELED 343 Mathematics in Childhood Ed	or	ELED 540 Math in the Elem School
ELED 344 Science in Childhood Ed	or	ELED 530 Science in Elem School
ELED 345 Social Studies in Childhood Ed	or	ELED 550 Current Trends in Social St
ELED 346 Children's Literature	or	ELED 521 Children's Lit for Adv. Study
REED 313 Foundations of Reading Instructional (6)	or	REED 523 Analysis of Techniques in Reading and three reading credits by advisement

Certification in Elementary Education **for Individuals Holding a Baccalaureate Degree** **without Teaching Certification**

The Elementary Education Certification Program is open to individuals who have successfully completed an undergraduate degree in an area other than education. The certification program (53 credits) is completed predominately at the undergraduate level with some options for graduate course work that may be applied towards a Master of Education degree. Prior to receiving certification in elementary education, candidates must complete successfully all requirements, the department screening, courses, and student teaching. The Certification Program is guided by the *ESU Initial Teacher Education Conceptual Framework* and consists of specific coursework (39 credits) plus student teaching (14 credits).

Entrance Requirements

Candidates for this program are admitted through the graduate school and adhere to graduate standards. Entrance requirements include a minimum quality point average of 2.75 overall and 3.0 in the major field of study. After acceptance into the program, candidates must meet with the ELED graduate coordinator for specific advisement.

Program Requirements

Undergraduate Requirements - The applicant's undergraduate degree program is reviewed to see if the student meets the General Education requirements (minimum of 50 semester hours distributed in arts and letters, natural, and social sciences) and to see whether any previously taken education courses may apply.

Department Screening - The screening process will be discussed during advisement with graduate coordinator. This is an essential first step in the completion of the program.

Professional Field Experiences - Two weeks of Professional Field Experience **or** one week and a Professional Development School semester (i.e., the student takes simultaneously the four courses marked * below).

Certification Courses (courses are 3 credits each unless otherwise indicated)

Professional Education - 9 semester hours

PSED 242 Educational Psychology	or	PSED 516 Learner and the Learning Process
PSED 161 Foundations of Education	or	PSED 510 Teacher and School Community
MCOM 262 Educational Communications of Classroom	or	MCOM 520 Selection and Utilization of Instructional Media for the Classroom

Elementary Education - 30 semester hours

ELED 132 Child Growth and Development:

(Prerequisite for all other Elementary Education courses)

ELED 346 Children's Literature

ELED 351 Music in Childhood Education

General Science, 570-422-3264

The faculty in general science (from the departments of biology, chemistry, geography and physics) offer a program of studies leading to the Master of Education degree with a major in general science, and the Master of Science degree with a major in general science. Students may pursue the degree in either of two options: the thesis program or the non-thesis program. For the Master of Education, the thesis may be done either in the area of science teaching or science content. Students seeking admission to the program should present an undergraduate degree with a strong background in chemistry or physics, including coursework in mathematics.

The program in general science is designed to provide a maximum of flexibility in requirements in order that the diverse backgrounds of the students enrolling may be accommodated.

Each student's plan of study will be developed by the student and his/her adviser. The plan of study will be designed to fit the needs and interests of the student while maintaining the high standards required of the program. Student programs will be subject to approval by the general science graduate faculty.

To provide the breadth characteristic of a general science program, a student entering the program with a specific major will be encouraged to enroll in graduate science courses outside of their major area. The level of those courses elected by the student will be appropriate for the graduate student in light of his/her background in the particular area of science. To provide depth in the program the student will be encouraged to enroll in more advanced graduate courses within the major area. Students whose undergraduate background is deficient in the content areas of science will plan programs to correct these deficiencies.

Master of Education

Thesis Program—30 Semester Hours

Required: GSCI 570 Introduction to Research
 GSCI 572 Thesis
 General Education, 3 semester hours;
 Professional Education, 3 semester hours;
 Major Field and Related Electives, 18 semester hours

Non-Thesis Program—34 Semester Hours

Required: GSCI 570 Introduction to Research
 GSCI 571 Independent Research Problem
 General Education, 3 semester hours;
 Professional Education, 3 semester hours;
 Major Field and Related Electives, 24 semester hours

Master of Science

Thesis Program–30 Semester Hours

Required: GSCI 570 Introduction to Research
 GSCI 572 Thesis
 Major Field and Related Electives, 24 semester hours

Non-Thesis Program–34 Semester Hours

Required: GSCI 570 Introduction to Research
 GSCI 571 Independent Research Problem
 Major Field and Related Electives, 29-30 semester hours

Courses chosen by the student in consultation with his advisory committee from among:

- Graduate courses offered by the departments of biology, general science, geography, mathematics and computer science.
- A maximum of three courses offered at the 300 or 400 level by the departments of biology, chemistry, geography, mathematics, computer science, and physics.

The student's advisory committee shall consist of an adviser assigned to the student on admission to the graduate school and two additional members of the graduate faculty chosen by the student in consultation with the adviser. The members of the committee must represent at least two departments.

Health Education, 570-422-3702

The graduate faculty in health offers two degree programs. One program leads to a Master of Science degree with a major in health education, requiring either 30 semester hours if the research option is selected or 36 semester hours if the non-research option is chosen. The second program is a 48 semester hour program that leads to a Master of Public Health with a concentration in community health education. The East Stroudsburg University Health Department is the only department in the fourteen State System of Higher Education institutions permitted to offer this degree. The program has been accredited by the Council of Education for Public Health.

Both programs are designed to accommodate students who are interested in health education for a variety of settings including schools, colleges, hospitals, communities and industry. No specific undergraduate degree is required. Students with undergraduate majors in health education, biology, computer science, psychology, nursing, nutrition, sociology, physical education and the allied health area are encouraged to apply. Each student's background is evaluated and a plan of study is designed for the student's individual needs. Students who have not acquired the necessary competencies at the undergraduate level or completed appropriate field experiences may be required to complete work beyond the minimum requirements.

Teacher Certification in health education may be acquired in conjunction with the master's degrees, although some additional work may be required.

Admission Standards: All students meeting the current catalog requirements

will be eligible for *conditional admission*.

- Bachelor's degree from an accredited college or university.
- An undergraduate minimum grade point average of 2.50 (4.00 basis) and a 3.00 in the area of specialization during the junior and senior years. Students who do not meet these standards or who have not completed a minimal undergraduate health education curriculum may be required to *complete* additional qualifying work.

Full Admission will be granted if above two standards are satisfied along with the following:

- Submit three verifiable references
- Submit GRE scores
- Submit a professional resume
- Full admission is a prerequisite to degree candidacy.

Conditional Admission will be granted if the candidate does not meet requirements for full admission. Continuation of study is dependent upon completion of deficiencies.

Master of Science, 570-422-3565

Health Education

The minimum requirements for the two options within the MS program are as follows:

Research Option—30 Semester Hours

Required:	HLTH 538	Public Health Administration	
	HLTH 539	Health Education Methods Workshop	
	HLTH 550	School Health Administration & Curriculum	
	HLTH 555	Health Education Evaluation	
	HLTH 560	Scientific Foundations of Health Behavior	
	HLTH 570	Introduction to Research	
	HLTH 571	Health Education Research Problem	<i>OR</i>
	HLTH 572	Health Education Thesis	
	MATH 502	Applied Statistics	<i>OR</i>
	MATH 516	Biometry	

5 to 8 credits of health education electives, and 3 credits of electives in the sciences, social sciences, professional education, administration or communications.

Non-Research Option—36 Semester Hours

Required:	HLTH 538	Public Health Administration
	HLTH 539	Health Education Methods Workshop
	HLTH 550	School Health Administration & Curriculum
	HLTH 555	Health Education Evaluation
	HLTH 560	Scientific Foundations of Health Behavior

HLTH 570	Introduction to Research	
MATH 502	Applied Statistics	OR
MATH 516	Biometry	

9 to 15 credits of health education electives, and 6 credits of general and professional education electives. To graduate, students are required to complete an oral comprehensive exam at the end of their coursework.

Master of Public Health, 570-422-3560

Community Health Education

48 Semester Hours

A Master of Public Health degree is awarded upon successful completion of a 48 credit hour program prescribed by the Health Department. This program is one of twelve MPH Programs in community health education in the United States to receive accreditation from the Council on Education for Public Health.

Required:

HLTH 509	Health Counseling
HLTH 537	Community Health Practice for Health Educators
HLTH 538	Public Health Administration
HLTH 539	Health Education Methods Workshop
HLTH 555	Health Education Evaluation
HLTH 560	Scientific Foundation of Health Behavior
HLTH 561	Epidemiology
HLTH 562	The Physical Environment and Community Health
HLTH 570	Introduction to Research
HLTH 571	Health Education Research Problem

OR

HLTH 577	Independent Study
HLTH 586	Field Experience and Internship
MATH 502	Applied Statistics

OR

MATH 516	Biometry
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Eight credits of electives such as: health administration electives, health education electives, computer science, or statistics are required. Six of these credits may be from outside the Health Department. To graduate students must take a comprehensive examination and complete a final publishable quality paper as part of their coursework.

Health and Physical Education Program

For Health and Physical Education Program, see Movement Studies and Exercise Science.

History, 570-422-3286

The graduate faculty offers two degree programs in history, the Master of Education and the Master of Arts. In the Master of Education degree program, the student has two options, the thesis program and the non-thesis program. In the Master of Arts degree program, the thesis is required of all students.

Degree candidates must complete degree programs in accordance with one of the outlines shown below. Individual programs and specific course selections are made under the supervision and with the approval of an adviser from among the graduate faculty in the major field.

Master of Arts

30 Semester Hours

Required:

HIST 570 Introduction to Research, 3 credits

Electives: 15-21 semester hours in history. Students must elect a minimum of 9 semester hours in either group A-United States History, or group B-European History, and a minimum of 3 semester hours in each of the two remaining groups, including group C-Area Studies. Related Areas (optional) 0-6 semester hours

Thesis: 6 semester hours.

Language Requirement: Knowledge of the fundamentals of one foreign language is required unless waived as indicated below. Emphasis is upon reading comprehension. The requirement may be satisfied in one of the following ways:

- Through at least 6 semester hours of a foreign language (with a grade of “C” or better) at the undergraduate or graduate level.
- Through examination of reading comprehension in a foreign language using materials in the major field or related areas.
- By substitution of all or part of the foreign language requirement with approved course(s) in advanced technical knowledge related to the major field. Substitution must be approved by the chairperson of the degree faculty.
- The foreign language requirement may be waived upon the approval of the adviser and the chairperson of the degree faculty if a student’s area of study and the thesis do not make necessary a language or other research tool.

Master of Education

Thesis Program–30 Semester Hours

Required: HIST 570, Introduction to Research, 3 credits

Electives: 12 to 15 semester hours in history

Related Electives: 0-6 semester hours

General Education and Professional Education Courses: 6 semester hours

Thesis: 3 semester hours

Non- Thesis Program–34 Semester Hours

Required: HIST 570, Introduction to Research, 3 credits
 Electives: 15-18 semester hours in history
 Related Electives: 3-6 semester hours
 General Education and Professional Education Courses: 6 semester hours
 Independent Research Problem: minimum of 1 semester hour.

Synopsis of Courses

United States History: HIST 501, 502, 503, 504, 505, 507, 508, 509, 511, 526,
 527
 European History: HIST 514, 517, 519, 522, 534, 535, 536, 537, 539, 540
 Area Studies: HIST 520, 521, 533, 541, 545
 Research and Cognate: HIST 570, 571, 572, 573, 577

Note:

For either degree program, the degree candidate must select a minimum of 18 credits of courses open only to graduate students.

National Park Service Internship

Interested students may arrange an internship for academic credit with the National Park Service at Gettysburg National Military Park, Morristown National Historical Park, Valley Forge National Historical Park, and Delaware Water Gap National Park.

Movement Studies and Exercise Science, 570-422-3106

The graduate faculty in the Department of Movement Studies and Exercise Science offers three separate master's degrees: 1) a Master of Education degree with a major in Health and Physical Education; 2) a Master of Science degree with a major in Physical Education, and 3) a Master of Science degree in Cardiac Rehabilitation and Exercise Science. The Master of Education degree has three separate tracks: thesis option, research problem option, and comprehensive examination option. Each candidate will prepare and follow a plan of study that must be approved by his/her graduate faculty adviser.

Master of Education

Major in Health and Physical Education-30-34 Semester Hours

The M.Ed. degree is available for students desiring to enhance their preparation for teaching health and physical education. Degree programs may be devised with a thesis option, a research problem option, or a comprehensive examination option. The minimum course requirements for programs leading to the degree, Master of Education with a major in health and physical education, are as follows:

Thesis Option–30 semester hours

The program must include at least one course from both the Professional Core and Scientific Foundation courses (see list below); Statistics (3 semester hours) or MSES 513-*Evaluation in the Teaching-Learning Process in Health and Physical Education*. For the remaining credit hours, up to six credit hours may be elected from courses outside the fields of Health and Physical Education and Movement Studies and Exercise Science.

Required:

MSES 570 Introduction to Research
 MSES 572 Thesis Seminar (1-3 Semester Hours Arranged)
 MSES 574 Research Laboratory, 1 semester hour

Or

HLTH 570 Introduction to Research
 HLTH 571 Health Education Research Problem (Semester Hours Arranged)

Thesis

Research Problem or Project Option 34 Semester Hours

The program must include at least one course from both the Professional Core and Scientific Foundation courses. For the remaining credit hours, up to six credit hours may be elected from courses outside the fields of health and physical education and movement studies and exercise science.

Required:

MSES 570 Introduction to Research
 MSES 571 Independent Research Problem (Semester Hours Arranged)
 MSES 574 Research Laboratory, 1 semester hour

Or

HLTH 570 Introduction to Research
 HLTH 571 Health Education Research Problem (Semester Hours Arranged)

Research Problem or Project

Comprehensive Examination Option–34 Semester Hours

The program must include at least one course from the Professional Core and one Scientific Foundations course. For the remaining credit hours, up to six credit hours may be elected from courses outside the fields of health and physical education and movement studies and exercise science.

Required:

MSES 570 Introduction to Research

Comprehensive Exam

Master of Education

Major in Health and Physical Education with a Concentration in Sport Management–34 Semester Hours

This concentration provides a graduate level experience leading to a master’s degree for individuals interested in pursuing careers related to sport management. This program continues to be structured in accordance with emerging National Association of Sport and Physical Education (NASPE) Guidelines. Career interest may range from athletic administration in public and private schools, colleges and universities, to the private sector, including sport clubs and professional athletics. This program requires an on-site internship of 6-9 credit hours and the successful completion of the Sport Management Comprehensive Examination.

The minimum course requirements are as follows and includes at least one course from the Professional Core courses and one from the Scientific Foundations courses:

Required:

MSES 570 Introduction to Research

MSES 586 Field Experiment and Internship (6-9 semester hours arranged)

Select 7 of the following MSES Courses (must include one course from Scientific Foundations & one from Professional Core).

MSES 519 Sport and Society

MSES 523 Administration: Physical Education and Sport Programs

MSES 546 Planning and Management of Sports Facilities

MSES 547 Sports Business and Finance

MSES 548 Sports Marketing

MSES 549 Sports and the Law

MSES 550 Sport Personnel Management

MSES 551 Application of Computers to Sports Management

MSES 553 Ethical Issues in Sports Management

MSES 559 Public Relations in Sport Management

MSES 561 Seminar: Adapted Physical Education

Comprehensive Exam

Master of Science

Major in Physical Education–30 Semester Hours

The M.S. degree program is available for those students who wish to pursue the study of a specialized focus within the body of knowledge underlying movement studies and exercise science. Students who seek admission to this degree program must develop and write an appropriate “Statement of Intent” that is a rationale for undertaking this course of study and an indication of the overall plan for academic progress.

Students must choose to specialize in either exercise science or psychosocial focus which is reflected in at least 12 credits of coursework (6 of which must be in courses in movement studies and exercise science). Students must also successfully complete a thesis and a comprehensive examination.

Required:

MSES 570	Introduction to Research
MSES 572	Thesis Seminar (1-3 Semester Hours Arranged)
MSES 574	Research Laboratory (1 semester hour)
MSES 513	Evaluation in the Teaching-Learning Process in Health and Physical Education Or Statistics

Must include 12 semester hours of Specialization courses and 5-8 semester hours of electives.

Thesis

Comprehensive Exam

Master of Science

Major in Cardiac Rehabilitation and Exercise Science 45 Semester Hours

An M.S. degree majoring in cardiac rehabilitation and exercise science is offered in conjunction with 6 other area medical centers. This program offers traditional classroom and laboratory experiences as well as specialized clinical experiences. Admission into this program is limited.

Students must pass a written comprehensive examination. Students must contact the MSES graduate coordinator for application materials, in addition to the graduate school forms. The program begins as a cohort group in the Summer Post Session and continues through the end of the following summer.

Required:

Summer Post Session Courses:

MSES 555	Exercise and Weight Control Workshop, 2 credits
MSES 556	Aerobic Fitness Workshop, 2 credits

Fall Semester Courses:

MSES 528	Physiology of Human Performance
MSES 530	Electrocardiography, Non-Invasive Cardiac Evaluations, and Implications in Exercise and Rehabilitation
MSES 531	Cardiac Rehabilitation Clinical Laboratory I
MSES 539	Coronary Heart Disease: Its Medical Diagnosis and Management
MSES 586	Field Experience and Internship

Spring Semester Courses:

MSES 532	Cardiac Rehabilitation Clinical Laboratory II
MSES 537	Stress Testing and Sports Prescription
MSES 538	Cardiac Pathology and Pharmacology
MSES 586	Field Experience and Internship (Semester Hours Arranged)
MSES 513	Evaluation in the Teaching-Learning Process in Health and Physical Education Or Statistics

Physical

Education Or Statistics

Summer Pre-Session Course:

MSES 536 Organization and Administration of Cardiac Rehabilitation and Primary Prevention Programs

Summer Main Session Courses:

MSES 533 Health and Fitness Clinical Laboratory III

MSES 595 Cardiac Rehabilitation Seminar

Summer Post Session Course:

MSES 541 American College of Sports Medicine Workshop (2 credits)

Comprehensive Exam

For any degree program, the degree candidate must select a minimum of 18 graduate credits of courses open only to graduate students.

All graduate students in the Movement Studies and Exercise Science Department will have to demonstrate computer literacy.

Professional Core Courses: MSES 510, MSES 517, MSES 518, MSES 520, MSES 521, MSES 523, MSES 561, MSES 565

Scientific Foundation Courses: MSES 515, MSES 516, MSES 519, MSES 525, MSES 526, MSES 528, MSES 529, MSES 530, MSES 534, MSES 537, MSES 538, MSES 539, MSES 544, MSES 560, MSES 562, MSES 563, MSES 585

Political Science, 570-422-3286

The graduate faculty in political science offers two degree programs in political science, the Master of Arts and the Master of Education. In the Master of Arts degree program all students must complete a thesis. In the Master of Education degree program, the student may elect to do a thesis program or a non-thesis program.

Candidates must complete degree programs in accordance with one of the outlines shown below. Individual programs and specific course selections are made under the supervision and with the approval of an adviser from among the graduate faculty in the major field.

Master of Arts

30 Semester Hours

Required:

POLS 570 Introduction to Research: Scope and Method, 3 semester hours;

Political Science Electives (minimum) 15-21 semester hours. Students must elect at least one course from each group:

Group A American Politics and Public Administration

Group B International Relations

Group C	Comparative Government and Regional Studies
Group D	Political Theory

Related Electives: students may select up to 6 semester hours from related areas: history, economics, sociology-anthropology, geography or other course(s) by permission of the graduate coordinator of the degree faculty.

Thesis Requirements: 6 semester hours.

POLS 572	Thesis I
POLS 573	Thesis II

Master of Education

Thesis Program–30 Semester Hours

Required:

POLS 570 Introduction to Research: Scope and Method, 3 semester hours.

Political Science Electives: 12 to 18 semester hours; students must elect at least one course from each of the four disciplinary groups.

Related Electives: students may select up to 6 semester hours from related areas by permission of the graduate coordinator of the degree faculty.

Professional and Secondary Education: students must take 6 semester hours from the School of Professional and Secondary Education.

Thesis requirement: 3 semester hours.

POLS 572	Thesis I
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Master of Education

Non-Thesis Program–34 Semester Hours

Required:

POLS 570 Introduction to Research: Scope and Method, 3 semester hours.

Political Science Electives: 12-15 semester hours; students must elect at least one course from each of the four disciplinary groups.

Related Electives: students may select up to 9 semester hours from related areas by permission of the graduate coordinator of the degree faculty.

Professional and Secondary Education: 9 semester hours taken from the School of Professional and Secondary Education.

POLS 571 Independent Research Problem, 1 semester hour.

Course List by Disciplinary Group

American Politics and Public Administration:

POLS 532	Seminar in Parties and Politics
POLS 533	The Presidency
POLS 534	Seminar: Presidential Elections and Politics
POLS 535	American Federalism
POLS 536	Seminar: Readings in Civil Liberties
POLS 537	Problems in Public Administration
POLS 554	The Legislative Process
POLS 566	Public Budgeting and Finance
POLS 586	Field Experience and Internship

International Relations:

POLS 538	United States Foreign Policy
POLS 541	Seminar on War and Peace
POLS 542	United States Diplomacy and International Organization [<i>currently being deleted</i>]
POLS 543	The United Nations
POLS 544	Theory of International Relations
POLS 545	International Law and Organization
POLS 549	Black Nationalism [<i>currently being deleted</i>]
POLS 550	Seminar in International Studies

Comparative Government and Regional Studies:

POLS 520	Area Studies
POLS 522	Seminar: Foreign Travel and Study
POLS 525	Seminar: The Middle East
POLS 540	Comparative Politics
POLS 548	The Politics of Developing Nations

Political Theory:

POLS 528	Comparative Policy Analysis
POLS 531	Contemporary Political Thought
POLS 547	Seminar in American Political Thought
POLS 562	Political Behavior
POLS 565	Revolutionary Governments [<i>currently being deleted</i>]

Research and Cognate:

POLS 570	Introduction to Research: Scope and Method
POLS 571	Independent Research Problem
POLS 572	Thesis I
POLS 573	Thesis II
POLS 577	Independent Study in Political Science
POLS 580	Interdependence of Nations [<i>currently being deleted</i>]

Professional and Secondary Education, 570-422-3363

The Department of Professional and Secondary Education offers the following programs: 1) Certification in Secondary Education, 2) Teaching Intern Program, 3) a Master of Education degree in Secondary Education, and 4) Principal Certification.

The Department of Professional and Secondary Education is composed of faculty members who have had a wide range of experiences that enrich the program. Faculty members have served as elementary and secondary school teachers, supervisors, guidance counselors, elementary and secondary school principals, superintendents of schools and as officers in State Departments of Education.

Secondary Education Certification

Program Requirements

Speech Screening
 Writing Sample
 Departmental Faculty Interview
 PRAXIS Exams
 Clearances, Act 34 and Act 151

PSED 161 Foundations of Education **or**
 PSED 510 The Teacher and the School Community

PSED 242 Educational Psychology **or**
 PSED 516 The Learner and the Learning Process

MCOM 262 Educational Communications **or**
 MCOM 520 Selection and Utilization of Instructional Media

REED 321 Teaching of Reading in the Secondary School **or**
 REED 527 Reading in the Content Area

PSED 420 Seminar in Secondary Education **or**
 PSED 520 Seminar in Secondary Education I

PSED 421 Seminar in Secondary Education II **or**
 PSED 521 Seminar in Secondary Education II

The programs for certification in secondary education are planned and supervised by the Department of Professional and Secondary Education and by the department responsible for the academic major. Students must achieve and maintain the minimum requirements for admission to and retention in the certification programs as specified by the departments and the Teacher Education Council. Specific requirements are listed in the academic subject areas, including a QPA of 2.5 or higher. Certification areas are the following:

Biology	General Science
Chemistry	German
Communication	Mathematics
Earth and Space Science	Physics

English
French

Social Studies
Spanish

The appropriate secondary education methods course (below) should be taken one or two semesters before enrolling in Student Teaching. Methods courses are not offered every semester. Students are encouraged to take Seminar I before or concurrently with the methods course.

PSED 306	Teaching of English in Secondary Schools
PSED 316	Teaching of Foreign Languages
PSED 336	Teaching of Mathematics in Secondary Schools
PSED 346	Teaching of Science in Secondary Schools
PSED 356	Teaching of Social Studies in Secondary Schools
PSED 376	Teaching of Communication in Secondary Schools
PSED 426	Professional Practicum
PSED 430	Student Teaching in Secondary Education/Middle School/ Junior High School
PSED 431	Student Teaching in Secondary Education/Senior High School.

Graduates who complete the required courses in one of the majors listed above, the professional education courses, the university requirements, and the state requirements are eligible to be recommended for certification to teach in their major in middle schools, junior high schools, and senior high schools within the Commonwealth of Pennsylvania. Applications for certification are obtained from the Dean of Professional Studies Office.

Teacher Intern Program, 570-422-3363

East Stroudsburg University offers the Teacher Intern Program, an opportunity for college graduates without teacher certification to enter the teaching profession in the secondary schools of Pennsylvania.

This program permits one to earn teaching credits while teaching under supervision and on full salary. This hands-on approach to earning teaching credentials has been designed to attract and hold individuals who might otherwise be lost to the teaching profession.

Admission Requirements

Acceptance into the program is required before seeking a teaching position in the public schools. The pre-admission screening procedures are:

- Interview by Faculty (Major Discipline Department/Professional and Secondary Education Department) Committee.
- Transcript evaluation of your academic achievements and satisfactory PRAXIS scores.
- A speech test will be administered by professional personnel of the Speech and Hearing Center.
- A writing sample is required.
- Pennsylvania Act 34 and Act 151 clearances are required. A criminal infraction may slow or stop certification.
- A bachelor's degree quality point average of 2.5 overall and 3.0 in the major is required.

Program Requirements

After admission to the Intern Program at East Stroudsburg University, successfully passing the PRAXIS Examination, meeting certain professional and academic requirements, including Seminar I, and having a clear criminal records check, one may seek employment in the secondary schools of Pennsylvania. If offered employment by a school district, one must immediately apply at the university (Dean, School of Education) for the Intern Certificate. From the time one gains employment and receives the Intern Certificate one has 3 years to complete the required education credits (coursework).

If one does not gain employment while holding the letter of candidacy, then teacher certification is available through the traditional route. After these steps are successfully completed, one receives the Instructional I Certificate.

Certifications available are the following: biology, chemistry, communication, earth and space science, English, foreign language (French, German, Spanish), general science, mathematics, physics, and social studies.

Master of Education in Secondary Education, 570-422-3363

This master's degree is designed for secondary (junior-middle-senior high) school teachers who wish to further develop the knowledge, skills and attitudes necessary for growth in teaching effectiveness, and for teachers seeking Pennsylvania elementary and/or secondary principal certification, or New Jersey principal or supervisory certificates. A minimum of 12 credits of PSED regular courses (not workshops) must be taken.

Within the framework of course flexibility and needs assessment, the individual will take experiences from the following:

Area of Concentration, 12 semester hours; Professional Education, 9 or 15 semester hours; Required Courses, 9 semester hours; *PSED 516 The Learner and the Learning Process*, *SPED 551 Inclusionary Practices*, and *ELED 570 Introduction to Research*. Total required is 31 or 36 semester hours, depending on the option selected.

The Areas of Concentration available at East Stroudsburg University presently include any academic area, administration, affective education, communications, curriculum, middle school, reading, health, special education, and other areas by arrangement. Teachers interested in securing a master's degree and certification, as a principal will find this program especially attractive. Students may acquire a *General Area of Concentration* by planning the program with an adviser and including courses suited to the needs and interests of the candidate. It is also possible to arrange for the transfer of 6 graduate credits from an accredited institution. Affective education Workshop courses can be taken as a concentration in the Master of Education program (12 credits); if not taken as a concentration, the maximum allowed is 6 credits of such workshop courses as they relate to your program. Preapproval is necessary.

Option I

The extended study option requires thirty-six graduate credits and successfully passing a written comprehensive examination, a portfolio, or a culminating research-based project.

Option II

Those candidates who elect to write an Independent Research Problem will enroll for thirty graduate credits of course work and one graduate credit for their Problem. Candidates are required to present three copies of their problem for an oral review.

Candidates must also submit a portfolio.

Principal Certification—Elementary and/or Secondary, 570-422-3363

East Stroudsburg University has received Pennsylvania program approval in School Administration leading to certification for the elementary and/or secondary principal.

The program has been designed for and will accept students who:

- Plan to enroll in a master's degree program at ESU, or
- Need additional course work to meet certification standards in Pennsylvania or other states, or
- Desire enrichment, professional education requirements for other degree programs or for other certification requirements and do not necessarily plan to seek certification as a principal.

Graduate credits already earned will be evaluated and accepted when applicable. Each student will have an adviser who will assist in planning the program in view of the students' needs and interests. In order to receive endorsement for a Pennsylvania Certificate, students will need to complete a 42-credit program with a minimum of 18 hours completed at ESU. New Jersey's requirement that a candidate have a master's degree in administration, leadership, or management can be completed at ESU by developing a master's degree plan of study based on the Pennsylvania approved principal's certification program.

This program has been approved by the Educational Leadership Constituent Council, the national organization for administration and leadership.

For all degree programs described above, the candidate must select a minimum of 18 credits of courses open only to graduate students.

Reading, 570-422-3416

The Reading Department offers a graduate program leading to certification as a reading specialist and a program leading to a Master of Education with a major in reading, which includes the certification as a reading specialist. Graduate students in both programs must develop and demonstrate the competencies established by the faculty to meet the standards required by the Pennsylvania Department of Education for the certificate.

Programs are planned for students on the basis of individual past experiences and the competencies that need to be developed. In general, these competencies are developed through a combination of the appropriate courses and experiences listed below.

Reading Specialist Certification

Reading Specialization: 27 credits

REED 521	Language and the Reading Process
REED 522	Theoretical Models of Reading & Literacy Processes
REED 523	Analysis of Instructional Techniques in Reading
REED 524	Reading Clinic Practicum, 6 credits
REED 526	Development of The School Reading Program
REED 527	Reading in the Content Areas
REED 529	Assessment and Evaluation of Literacy
REED 580	Research Problems in Reading

Master of Education

39 Semester Hours

Required:

ELED 570	Introduction to Research
REED 521	Language and the Reading Process
REED 522	Theoretical Models of Reading & Literacy Processes
REED 523	Analysis of Instructional Techniques in Reading
REED 524	Reading Clinic Practicum, 6 credits
REED 526	Development of The School Reading Program
REED 527	Reading in the Content Areas
REED 529	Assessment and Evaluation of Literacy
REED 580	Research Problems in Reading

ELECTIVES: Nine semester hours of electives which may be taken in elementary education, secondary education, special education, and media, communication and technology.

Special Education, 570-422-3247

The Department of Special Education and Rehabilitation offers a Master of Education degree with a major in special education. There are three different plans of study, which are determined by the individual needs of the student. The first option includes the completion of requirements for an Instructional I certificate, ranging from the minimum of 36 credits to 56 credits depending upon the undergraduate training of the applicant. The second option is a 36-credit program for students who have an Instructional I certificate in special education. The final option is a 30-credit program that includes the fulfillment of a 3 or 6 credit thesis. For students selecting option 3, the thesis takes the place of the comprehensive examination. Under options 2 or 3, completion of coursework necessary for the Special Education Supervisor certificate is possible. Requirements for admission and matriculation in the supervisory program are described in a separate publication called the Special Education Supervisor Certificate. This document is available from the coordinator of graduate studies for the Department of Special Education and Rehabilitation.

Master of Education

The following is a summary of the three option plans for certified and non-certified candidates. SPED 551 is the only acceptable course which may be used as the core requirement. Secondary Education Graduate students must take SPED 551.

Option A–Non Special Education Certified

36 to 56 Semester Hours

A thirty-six to fifty-six credit hour plan of study designed for candidates holding a Bachelor's degree and/or holding any non-special education certificate. This candidate is required to meet existing special education certification requirements (including a student teaching experience). The student teaching requirement may be waived, upon application to the department, if the student has a student teaching experience documented on official transcripts. Required: Eighteen credits of professional requirements or their undergraduate equivalent;

Professional Requirements: Total = 18
 ELED 502 Psychology of the Elementary School
 PSED 516 Learner and the Learning Process
 PSED 504 Philosophy of Education
 PSED 509 History of Education
 PSED 511 Educational Sociology
 MCOM 510 Computers in Education
 REED 521 Language and the Reading Process
 REED 527 Reading in the Content Areas

Major Requirements: Total = 24 credits
 SPED 550 Nature and Needs
 SPED 551 Inclusionary Practices
 SPED 554 Curriculum & Instruction
 SPED 555 Curriculum & Instruction
 SPED 566 Applied Behavioral Analysis
 SPED 568 Early Intervention
 SPED 581 Measurement and Evaluation

SPED 584 Seminar: Vocational & Career

M.Ed. Requirements: Total = 12 credits

ELED 570 Introduction to Research

PSED 504 Philosophy of Education or

PSED 509 History of Education or

PSED 511 Educational Sociology

Student Teaching: Total = 14 credits

SPED 420 Student Teaching 1 12

SPED 421 Professional Practicum 2

The Department of Special Education and Rehabilitation may accept up to six (6) transfer credits from other IHE offering special education graduate studies. Admission, retention and graduation requirements for the Master of Education degree with a major in Special Education are available from the Department of Special Education and Rehabilitation.

For any degree program the degree candidate must select a minimum of 18 graduate credits of courses open only to graduate students.

Option B–Special Education Certified

36 Semester Hours

A thirty-six credit hour plan of study designed for candidates already holding a Bachelor of Science in education degree and holding a valid and current special education teaching certificate.

M.Ed. Requirements: Total= 6 credits

ELED 570 Introduction to Research

PSED 504 Philosophy of Education or

PSED 509 History of Education or

PSED 511 Educational Sociology

Major Requirements: Total = 24 credits

SPED 551 Inclusionary Practices

SPED 582 Seminar in Current Trends

SPED 570 Collaboration in Education Process

* 15 graduate credits of special education coursework including two seminars and any 6 credits of professionally related courses.

Option C–Thesis or Problem

30 Semester Hours

A thirty-credit hour plan of study designed for candidates having the same professional qualifications as candidates in Option B, but who wish to prepare a thesis or a problem paper in lieu of the six additional credit hours required under the Option B study plan. Topic of this research paper will be at the discretion of the candidate's assigned adviser and select committee members and will follow the research requirements format described in the general regulations section of this catalog.

M. Ed. Requirements: Total = 6 credits

ELED 570	Introduction to Research	
PSED 504	Philosophy of ED	or
PSED 509	History of Education	or
PSED 511	Educational Sociology	

Major Requirements: Total =18 credits

SPED 551	Inclusionary Practices	
SPED 566	Applied Behavioral Analysis	
SPED 575	Seminar: Research Problems	
SPED 582	Seminar: Current Trends in SPED	
SPED 572	Thesis I	
SPED	and Elective_____	or
SPED 573	Thesis II	6

One special education elective and any 6 credits of professionally-related courses.

Speech-Language Pathology, 570-422-3247

The Department of Speech Pathology and Audiology offers a Master of Science in Speech-Language Pathology. The program is designed to meet the needs of non-traditional and part-time students, as well as those of underrepresented minority students. The academic and clinical education components of this degree are designed to meet the requirements of the American Speech-Language-Hearing Association Certificate of Clinical Competence in Speech-Language Pathology (CCC-SLP). Students may also be eligible for a Pennsylvania License in speech-language pathology. In addition, students may choose to complete requirements for the Instructional I certificate in Pennsylvania schools (with the completion of certain education courses, a student teaching semester, and required NTE examinations). The choice of the school certification option may lengthen the student's degree program.

The program is accredited in speech-language pathology by the American Speech-Language Hearing Association.

A thesis is not required. All students must pass a comprehensive examination.

The degree normally takes five semesters to complete if pursued full time (fall, spring, summer, fall, spring), and eight to nine semesters if pursued part time. Class times are late afternoon and evening to accommodate students' work schedules. Clinical practicum work generally involves day times. A limited number of graduate assistantships are available through the department.

Admission Procedures and Requirements (Deadline: February 1)

Students must be admitted both to the ESU graduate school and the M.S. in Speech-Language Pathology program. Students should obtain a complete application packet (which includes applications to the graduate school and the M.S. in Speech-Language Pathology) by calling the Speech Pathology and Audiology Department secretary at 570-422-3247 to request an application. The application deadline is February 1 for fall admission. Applications postmarked after February 1 will not be considered. Spring admission is not offered. For specific information, call Dr. Robert Ackerman, graduate coordinator, at 570-422-3682.

The following admission criteria will be applied:

- Bachelor's degree
- GPA 2.8 overall; GPA 3.0 in undergraduate major
- GRE scores of at least 1050 combined for verbal and quantitative
- Three letters of reference attesting to academic performance and potential
- Statement of professional goals
- Undergraduate background:
 - a. child development or developmental psychology
 - b. linguistics
 - c. statistics
 - d. speech science
 - e. introduction to audiology
 - f. introduction to communication disorders
 - g. speech and language development
 - h. phonetics or phonology
 - i. anatomy & physiology of speech/hearing mechanism
 - j. articulation/fluency disorders
 - k. clinical practicum
 - l. natural sciences (6 hrs.)
 - m. behavioral/social sciences (6 hrs.)
 - n. composition/writing (3 hrs.)
 - o. college level math course (3 hrs.)

Applicants who do not meet all of the criteria under 6) above may gain conditional admission but must remedy any deficiencies prior to filing a plan of study with the graduate school.

Master of Science

The following summarizes the academic, clinical, and comprehensive examination requirements for the degree of Master of Science in Speech-Language Pathology.

Academic Coursework (minimum of 47 semester hours).

The academic coursework requirements are designed to meet the American Speech-Language-Hearing Association requirements for the Certificate of Clinical Competence in Speech-Language Pathology. Students may transfer up to 6 semester hours of appropriate graduate credits from another graduate program. No more than three graduate credits of coursework with a grade of "C" or lower may be on the transcript in order to be eligible for the degree. No more than one SPPA course may be repeated to improve the grade.

Required Courses - 39-45 semester hours:

- | | |
|----------|--|
| SPPA 510 | Neural Bases of Communication Disorders |
| SPPA 534 | Clinical Audiology |
| SPPA 535 | Aural Rehabilitation |
| SPPA 541 | Phonological Disorders – Assessment and Intervention |
| SPPA 542 | Language Disorders in Children |

SPPA 543	Language Disorders in Adults
SPPA 544	Fluency Disorders
SPPA 546	Voice Disorders
SPPA 550	Advanced Clinical Practicum (2 credits) (must be taken at least twice)
SPPA 560	Diagnostic Procedures in Speech-Language Pathology (2 credits)
SPPA 561	Diagnostic Practicum (2 credits)
SPPA 562	Dysphagia
SPPA 584	Research Methods and Materials in Speech-Language Pathology and Audiology
SPPA 586	Advanced Clinical Externship (1-6 credits)

Elective Courses - a minimum of 8 semester hours to be chosen from the following:

SPPA 521	Augmentative/Alternative Communication
SPPA 532	Multicultural Issues in Speech-Language Pathology
SPPA 536	Advanced Sign Language and Related Topics
SPPA 563	Adolescent Language Learning Disabilities
SPPA 568	Alaryngeal Speech Rehabilitation
SPPA 569	Motor Speech Disorders
SPPA 572	Thesis
SPPA 574	Orofacial Anomalies
SPPA 575	Communication Disorders Resulting from Traumatic Brain Injury
SPPA 577	Independent Study
SPPA 582	Management of School Programs in Speech-Language Pathology (2 credits)

Clinical Practicum

Each student is required to meet the clinical education requirements for the ASHA CCC-SLP (375 hours of clinical observation and practicum) in order to receive the degree. The clinical requirements may be met through a combination of undergraduate preparation and graduate work. At least 250 clock hours of practicum must be completed at the graduate level. All students will complete at least two practicum experiences at the ESU Speech & Hearing Clinic (through SPPA 550 Advanced Clinical Practicum) and at least one off-campus practicum experience (through SPPA 586 Advanced Clinical Externship). A variety of externship sites will be available off campus. Students may suggest off campus practicum sites at which they would like placements, but all practicum sites must be arranged and administered through the department. Students who choose the Pennsylvania Instructional I Certificate option must complete a student teaching semester in a school setting.

Comprehensive Examination

In order to receive the degree, students must pass the National Examination in Speech-Language Pathology. The passing score is set by ASHA. Passing this exam is also one of the requirements for the CCC-SLP.

Course Descriptions

Art

ART 511 Fine Arts & Ideas (3:3:0)

Members of the Art, Music and Theatre Faculties offer this integrated study of humanistic values in the Visual and Performing Arts. Students will have the opportunity to focus on specialized areas of interest through discussion and research. This course is also listed as MUS 511 and THTR 511.

ART 512 Women Artists: A Historical Survey (1.5:1.5:0)

This course is a more “in depth” historical survey of works by women artists to help students to develop an awareness of and an appreciation of the role of women in art. A research paper or special related art project will be required.

ART 513 Twentieth Century American & European Women Artists (1.5:1.5:0)

This course will entail studying works of art done during the Twentieth Century by women in Europe and America in greater depth. A research paper or special related art project will be required.

ART 577 Independent Study (Semester hours arranged.)

This course consists of directed research and study on an individual basis.

Biology

BIOL 501 Human Genetics (3:3:0)

This course relates principles of both transmission and molecular genetics to the human organism. Particular stress will be placed on inborn errors such as Down’s Syndrome, Klienfelter’s Syndrome, and Tay-Sachs Disease. Prerequisite: BIOL 331, Genetics.

BIOL 502 Man and His Environment (3:3:0)

This course is a study of the various environmental problems, such as air and water pollution, in relation to ecological principles. Viewpoints of ecologists, sociologists, political scientists, and engineers will be presented.

BIOL 503 Molecular Genetics (3:3:0)

This course is designed specifically to lead the advanced student into current literature especially selected to present evidence of the unique synthesis and degradation of nucleic acids and proteins, and that the primary effect of the “gene” occurs at the biochemical level.

BIOL 504 Developmental Genetics (3:3:0)

This course is constructed to focus the energies of the student on the role of DNA during cell differentiation and to critically examine the evidence for the theme that differential gene function is the basis of cell differentiation, and consequently of embryonic development.

BIOL 505 Developmental Biology, Animal (3:2:3)

A course designed to investigate the problem of control of development, cell differentiation, and growth. Lecture will consist of a review of current literature bearing on the problem. Laboratory will concentrate on growth and differentiation in the adult animal. Prerequisite: Permission of instructor.

BIOL 506 History of Biology (3:3:0)

This course is a study of the history and philosophy of biological science oriented toward case histories and salient developments in fields of scientific endeavor. This course is designed to offer

the student an opportunity to gain an appreciation for the emergence of scientific theories and to present a basis for a conceptual view of the chosen area of specialization.

BIOL 507 Organic Evolution (3:3:0)

This course seeks to develop a synthetic theory of evolution: to describe the sources of variability; to organize genetic variability in the population; to evaluate isolation, hybridization, and ploidy.

BIOL 508 Biological Instrumentation (3:2:3)

This course deals with the basic principles concerning the theory, methods and uses of instruments in biological analysis.

BIOL 509 Computer Applications in Biology (3:2:3)

This course is designed to provide students with the ability to apply computer technology to common problems in the biological sciences. The course will include biological applications in literature and data base searches, computer simulation and modeling, teaching of biology, reviewing available software and hardware, and interfacing of computers for data collecting in the laboratory.

BIOL 510 The Physical Environment and Community Health (3:3:0)

This course reviews traditional and evolving public health concerns related to the physical environment. Major areas of concern are solid waste, housing, water, air, accidents, food sanitation, overpopulation and global concerns.

BIOL 511 Animal Ecology (3:3:0)

This course is designed to acquaint the student with the principles of population dynamics, community structure, bioenergetics and other advanced concepts of ecology.

BIOL 512 Plant Anatomy (3:2:3)

This course consists of studies of the external and internal structure of vascular plants with emphasis on development of the mature plant and its functional security. Attention to primary and secondary plant bodies; xylem, phloem and cambium; leaf, stem and root.

BIOL 513 Predator-Prey Relationships (3:3:0)

Predator-prey relationships are prime examples of coevolution and evolutionary arms races. The study of such relationships provides insights into evolutionary and ecological mechanisms of animal interactions. These interactions will be looked at within the framework of Optimal Foraging Theory.

BIOL 514 Pathogenic Microorganisms (3:3:0)

This course is a study of the pathogenic microorganisms exclusive of the protozoa. Emphasis is on isolation and identification of the forms infecting man. The morphological, cultural, biochemical, serological and pathological characteristics will be stressed in the laboratory.

BIOL 515 Protozoology (3:2:3)

This is a course in the pathogenic protozoa of man and domestic animals. Particular emphasis will be on developing proficiency in recognition of forms and morphological characteristics. The natural history and economic importance will be stressed as well as selected life cycle studies.

BIOL 516 Introduction to Molecular Biotechnology (3:2:3)

This course will provide students with an overview of modern molecular biology and the growing field of biotechnology. The laboratory component will allow students to use some of the major techniques and instrumentation widely used in molecular biology research. Lectures will include key projects and illustrate the application of biotechnology to problems of disease prevention and vaccine production.

BIOL 517 Helminthology (3:2:3)

This is a laboratory and lecture course designed to acquaint the student with the parasitic helminth of man and animals. Emphasis will be upon identification and life cycle studies. Individual projects encouraging in-depth study of a particular parasitological phenomenon are an integral part of the course.

BIOL 518 Cytology (3:3:0)

This course is designed to acquaint the student with the subject of cellular structure; to give the students an understanding of the more modern concepts of cellular organization; and to bring to students the modern techniques of investigation of the detailed structure and processes of the cell.

BIOL 519 Virology (3:3:0)

This course includes a study of the aspects of systematics, serology, immunology, vaccines and genetics of viruses. Representative viral diseases along with their mechanisms for pathogenicity are studied.

BIOL 520 Biology of Aging (3:3:0)

This course covers the biological aspects of aging. Theories of aging as well as the actual physiological changes that occur on the molecular, cellular and systematic levels are discussed.

BIOL 521 Introductory Mycology (3:2:3)

This course is a survey of higher and lower fungi and includes field collections of fleshy fungi with laboratory physiological studies and identification. Emphasis on Fleshy Basidiomycetes and Fungi Imperfecti.

BIOL 522 Plant Physiology (3:2:3)

This course is a study of the functions of higher plants, including water relations, photosynthesis, respiration, nutrition, hormones and growth regulators as well as the practical applications of plant physiology. Special emphasis will be given to areas of current research interest.

BIOL 523 Plant Ecology (3:2:3)

This course is designed to instill a knowledge of the principles and fundamentals of plant ecology and the methods of vegetation analysis.

BIOL 524 Mechanisms of Disease I (3:3:0)

This course will discuss the mechanisms contributing to disease and representative diseases affecting the various body systems. Readings, Kodachrome slides, and selected, preserved organs/tissues will be used to graphically illustrate the diseases.

BIOL 525 Herpetology (3:2:3)

This course will review the biology of the vertebrate classes Amphibia and Reptilia from an organismic perspective. The topics of focus will include evolution, systematics, ecology, and behavior. Field research techniques will also be emphasized.

BIOL 526 Wildlife Biology (3:2:3)

A management approach to wildlife resource biology. The emphasis is in life histories, investigative techniques and field research methods. Most North American game species are included. Prerequisite: Introductory Biology sequence.

BIOL 527 Natural History of Western Fauna (6:0:12)

This program provides for a graduate and undergraduate course which gives the student a unique opportunity for field study across the country. Although the focus will be on animal life in the Pacific Northwest, adequate attention will be given to wildlife on principal refuges found along the route both to and from the Northwest.

BIOL 528 Zoogeography (3:3:0)

The course deals with the geographical distribution of animals. It is designed to explain the pattern of animal distribution, how that pattern has been formed, and why it was formed. It also will deal with the question of what present animal distributions indicate about past climates and environments. A secondary but supporting area will be that of the ecology of invasions. This includes present day migrations of animals from former to new habitats.

BIOL 529 Human Physiology (3:3:0)

This course is a study of the function and interrelationships of the organ systems of the human body with particular emphasis on the muscular, circulatory, endocrine, nervous, and respiratory system.

BIOL 530 Applied Microbiology (4:3:3)

This course stresses the applications of principles learned in general microbiology. Emphasis will be placed on specific microbiological techniques as they apply to pathogenic microorganisms, agriculture, and the environment.

BIOL 531 Ecological Physiology (3:2:3)

Various physiological processes such as temperature control, salt and water balance, will be studied by examining the modifications that make specific animals better adapted for survival in a particular environment.

BIOL 533 Comparative Physiology (3:3:0)

This course studies the relationships of physiological processes and adaptations of animals to their ecology and phylogeny.

BIOL 534 Cell Physiology (3:3:0)

This course is a study of the basic principles governing the activities of cells in terms of physical and chemical processes. Particular emphasis is placed on current as well as classic publications in the field.

BIOL 535 Endocrinology (3:3:0)

This is a study of the embryology, histology, and function of the chemical integrating system-the endocrine system- of animals with particular emphasis on the vertebrates.

BIOL 536 Endocrinology of Sexual Reproduction (3:3:0)

This course studies the comparative anatomy and physiology of the vertebrate reproductive system; the chemistry and action of hormones concerned with reproduction. Prerequisite: BIOL 535 or consent of instructor.

BIOL 537 Immunology (3:3:0)

This is a course designed to develop a basic understanding of the immune system and its relationship to disease. In addition to the basic concepts of immunoglobulin and antibody structure and their related reactions, everyday problems, such as ragweed and penicillin allergy, immunization procedures, as well as serologic tests involving antigen-antibody reaction will be considered.

BIOL 538 Physiological Biochemistry (3:3:0)

This course is a study of the properties and interrelations of the major biochemical processes such as the Krebs's cycle, electron transport system, glycolysis, urea cycle, and photosynthesis. Also studied are the properties and synthesis of proteins, amino acids, lipids, carbohydrates and nucleic acids as well as enzyme kinetics and thermodynamics.

BIOL 539 Physiological Biochemistry Lab (1:0:2)

Experiments will be performed in conjunction with the Biochemistry lecture course (BIOL 538). These experiments will cover the cell physiology techniques and concepts. Not accepted for General Education.

BIOL 540 Cell Physiology Lab (1:0:2)

Experiments will be performed in conjunction with the Cell Physiology lecture course (BIOL 534). These experiments will cover the cell physiology techniques and concepts. Not accepted for General Education.

BIOL 541 Ecology of Water Pollution (3:2:2)

This course is a study of the effects of various types of pollution on the fresh water, estuarine, and salt water ecosystems. Monitoring of polluted and unpolluted situations will be conducted in the field and bioassay techniques will be shown in the laboratory. Various indices of the extent of water pollution will be discussed.

BIOL 542 Biology of Aquatic Macrophytes (3:2:2)

This course considers the identification, ordination, morphology, physiology, and ecology of the larger vascular and non-vascular aquatic plants.

BIOL 543 Stream Ecology (3:2:3)

Stream Ecology is a course designed to study the biological parameters of rivers and streams with special emphasis on trophic dynamics, invertebrate-vertebrate communities, and seasonal changes. The effects of pollution on various aspects of streams will also be a major consideration. Field investigations will be used to examine differing streams and their particular characteristics. A variety of sampling techniques will be used in the field to give students experience with different methods of answering ecological questions.

BIOL 544 Biology of Water and Wastewater (3:2:2)

This course is a study of fungi, bacteria, algae, protozoa, insects and worms as they are used in the treatment of wastewater and as they affect or interfere with the purification of drinking water. Physical, chemical, and biological factors that affect these organisms in the respective facilities will be monitored and various tests of the efficiency of the treatment will be introduced. Field trips to a variety of water and wastewater facilities will be taken.

BIOL 545 Ecology of Fishes (3:2:3)

This course deals with the taxonomic, physiological, ecological and behavioral aspects of fishes; it includes laboratory and field trips.

BIOL 546 Limnology (3:2:3)

This course deals with the basic principles of physical limnology in relation to several types of communities in lakes and streams; laboratory and field trips.

BIOL 547 Biology of the Plankton (3:2:3)

This course deals with the pelagic organisms in lakes and oceans and the factors controlling their distribution and production; course will cover planktonic plants and animals (e.g. algae, protozoa, rotifers, crustacea, and fish larvae) and the part they play in the economy of natural waters; laboratory and field trips.

BIOL 548 Biology of Aquatic Insects (3:2:3)

This course deals with the taxonomy, life history, and general biology of aquatic insects; laboratory and field trips.

BIOL 549 Cell Biology (3:3:0)

This course will provide an in-depth examination of cell structure and function, and the interrelationship between the two. Special attention will be given to membranes, cytoskeleton, and cell surface structures. The function of these structures in the coordination of activities occurring within and among cells will be stressed.

BIOL 550 Field Entomology (3:2:3)

Taxonomic approach of insects coupled with field collection, and identification. Study includes ecology, morphology, Systematics and lab techniques. An introductory course with no prerequisites.

BIOL 551 General Entomology (3:2:3)

This course is a study of insects with respect to morphology, physiology, taxonomy and ecology; insects of economic importance used as examples. A basic course leading to several aspects of entomology such as insect morphology, economic entomology, insect physiology, medical entomology, etc.

BIOL 552 Insect Morphology (3:2:3)

This course is a study of the internal and external structures of insects as related to specimens in the laboratory.

BIOL 553 Insect Physiology (3:2:3)

This course deals with a functional aspect of insect life, including various life processes such as digestion, nutrition, excretion, circulation, respiration, behavior, reproduction, development, and metamorphosis, as related to the morphological and anatomical structures.

BIOL 554 Medical Entomology (3:2:3)

This course is a study of arthropods that affect the health of man and animals. The study includes a brief account of the introductory entomology and that of the ticks, insects, and mites of medical importance, both as vectors, and as the casual agents of pathological conditions. Some aspects of the control methods from the Public Health point of view are also examined and investigated. It seeks understanding of the principles of the vector host relationship.

BIOL 555 Economic Entomology (3:2:3)

This course is a study of the insects of economic importance with respect to their identification, life history, biology, harmful or beneficial effects and control. The scope comprises of agriculture, forestry, veterinary, medical and household insects. The principles of insect control with recent approaches are also dealt with.

BIOL 556 Pest Control and Pest Management (3:2:3)

This course deals with identification, biology, damage and control of structural, household and commercial pests of insect and non-insect (including vertebrates) origin. Pesticide classification, chemistry, mode of action and handling are studied. Preventive and non-chemical control methods using the Integrated Pest Management (IPM) principle are also discussed. Standard toxicological techniques with bioassay evaluations are administered.

BIOL 557 Behavioral Ecology (3:3:0)

Behavioral Ecology is designed to introduce students to animal behavior within an ecological and evolutionary content. The subject matter deals with ways in which an organism's behaviors are influenced by the environment, especially with regard to resource distribution. Prerequisites: 8 credits of introductory biology.

BIOL 558 Wildlife Diseases (3:3:0)

This course includes the study of the occurrence, principles, concepts and significance of disease in wildlife. Representative diseases along with their mechanism for pathogenicity will be studied. Since this course also is offered for graduate credit, a differentiation of requirements will be made.

BIOL 559 Wildlife Disease Laboratory (1:0:3)

This course is designed to demonstrate the immunological and biochemical factors in disease diagnosis. Common laboratory tests in hematology, blood chemistry, and microbiology will be employed. Birds, fish and mammals will be the subjects examined. Since this course is also offered for graduate credit, a differentiation of requirements will be made.

BIOL 561 Mechanisms of Disease Laboratory (1:0:3)

This course is designed for nursing students. It focuses on basic mechanism of disease (the processes). The main thrust is directed toward identification of the changes in the human body at cellular, tissue, and system levels when insulted by a disease. Glass microscopic slides, 35mm slides, organ and tissue specimens, images from the Internet and CD-ROM programs will be utilized in this course. Corequisite: BIOL 524.

BIOL 562 Mammology (4:3:3)

An overview of the vertebrate class Mammalia, this course is designed to help the student develop a basic understanding of the anatomy, diversity, ecology, fossil records, and geographical distributions of mammals. Students will be exposed to the modern and fossil mammals of the world – with a focus on the regional fauna – through a combination of classroom discussion, lecture, laboratory work with preserved specimens, field trips, and field work.

BIOL 563 Conservation Biology (4:3:2)

This course will synthesize topics relating to the conservation of animals and plants, including extinction, genetics, demography, insularization, threats to biodiversity, conservation economics, environmental ethics, and strategies for conservationists.

BIOL 564 Population Genetics (4:3:3)

This course will cover the basics of population genetics. Stress will be placed upon understanding the basic processes of evolutionary genetics. The initial part of the course will cover the basic models of population genetics; the second half will deal with contemporary controversies or problems. The laboratory will emphasize data analysis.

BIOL 565 Immunology Laboratory (1:0:3)**BIOL 567 Fish Health Management (3:2:3)****BIOL 571 Independent Research Problem (Semester hours arranged.)**

This course is designed to acquaint the student with recent methods of research in particular areas of investigation, to instruct in the writing of acceptable research reports, and to acquaint the student with the literature directly related to a particular problem.

BIOL 572 Thesis I (3:0:0)**BIOL 573 Thesis II (3:0:0)****BIOL 577 Independent Study in Biological Science (Semester hours arranged.)**

Under the auspices of a qualified member of the faculty of the graduate school, the student pursues a pattern of readings, study, and research related to professional knowledge and understanding in Biological Science. Topics should be established prior to enrollment. Prerequisite: Permission of the Chairperson of the Graduate Faculty in Biological Science.

BIOL 584 Experimental Immunology (1:0:3)

This is a laboratory course designed to complement lectures and provide the student with experience in immunological methods.

BIOL 585 Virology Laboratory (1:0:3)

This course includes the study of the handling and infection of laboratory animals with viruses. The use of cell or tissue cultures in virology will be reviewed. To study viral replication, laboratory exercises in phage activity, bacterial growth curve and animal virus growth curves will be performed.

BIOL 586 Field Experience and Internship (Semester hours arranged.)

An integral part of the field experience and internship requires that the student work under supervision with a federal, state or private organization in some Biologically related aspect of the respective organization. Students will coordinate their course work acquired at East Stroudsburg University with specific field experiences. A formal written report must be submitted at the culmination of the experience.

BIOL 591 Behavioral Ecology Laboratory (1:0:3)

Laboratory topics will introduce students to experimental design, data acquisition and behavioral observation techniques under laboratory and field conditions using a variety of invertebrate organisms and plants. Some Saturday laboratories will be required.

BIOL 592 Mechanisms of Disease II (3:3:0)

This course is a continuation of Mechanisms of Disease I. The mechanism of diseases affecting organ systems will be studied. An account of important aspects of the pathology of human disease will be discussed.

BIOL 593 Biology of Tropical Ecosystems (3:1:4)

This course will impart a thorough understanding of tropical ecology through introductory lectures, student presentations and an intensive, 2 week field experience. The field experience will provide research opportunities for students on ecological and behavioral aspects of selected organisms and/or concepts. Destinations include Costa Rica, Ecuador, Florida or Kenya. The course will be offered on demand during appropriate winter, spring or summer sessions.

BIOL 597 Pathogenic Microbiology Laboratory (1:0:3)

This course includes the study of the handling and culturing of bacteria. Antimicrobial resistant mechanisms will be emphasized. Diagnostic, non-cultural methods using probes and polymerase chain reaction techniques will be included.

BIOL 598 Molecular Biology (3:3:0)

This course is intended to provide in-depth coverage of the principles of molecular biology. The structure of nucleic acids and proteins will be reviewed. The process of DNA replication, transcription, and translation in both prokaryotes and eukaryotes will be covered. The control of gene expression in several representative systems will be discussed in detail. Current methodologies in recombinant DNA research will be emphasized.

BIOL 599 Molecular Biology Lab (1:0:3)

This course is intended as an adjunct to BIOL 439 Molecular Biology. This course will provide students with hands-on experience using techniques for molecular biology research including DNA isolation, Southern blotting, and PCR (polymerase chain reaction). Corequisite: BIOL 598.

Courses taught with a BIOM rubric are those courses normally taught at the Marine Science Consortium field station at Wallops Island, Virginia. These BIOM courses are taught through the Biological Sciences Department and, unless specified otherwise in the course description, BIOM courses will count as Biological Sciences courses toward a major within the Department.

BIOM 501 Biological Oceanography (3:2:3)

The interactions between biological communities and the oceanic environment are studied with emphasis on the distributions of coastal plankton, fishes, and benthic invertebrates.

BIOM 502 Marine Evolutionary Ecology (3:2:3)

This course will study the ecological mechanisms underlying evolutionary processes. It is broad in scope and requires that students synthesize both evolutionary and ecological concepts and theory into an understanding of how organisms adapt to their environment.

BIOM 503 Comparative Physiology of Marine Organisms (3:2:3)

This course is an introduction to the physiology of marine organisms utilizing a comparative approach. A wide range of marine organism will be used to demonstrate the variety of mechanisms and strategies that allow them to physiologically adapt to their specific environments.

BIOM 504 Research Diver Methods in Marine Science (3:2:3)

Students in this course will study the marine environment with the use of SCUBA as a research tool. SCUBA will be used to collect samples, to measure the distribution of the flora and fauna, and to evaluate the productivity and biomass of select benthic communities. Prerequisite: SCUBA certification.

BIOM 558 Coastal Environmental Oceanography (3:2:3)

This course examines the interaction of biological, chemical, physical, geological and ecological ocean processes as applied to coastal environments. Emphasis is placed on environmental management issues of the coastal zone. Topics include water quality analysis, barrier island geology and ecology, estuarine pollution, beach defense and biological implications in areas of coastal up welling and coastal fronts. Specific cases in coastal pollution will be examined from coastal environments around the U.S. Prerequisites: Two semesters of introductory biology and Introduction to Oceanography.

BIOM 559 Advanced Methods in Coastal Ecology (3:2:3)

This course covers the wide array of methods of data collection, study designs, and analyses used in ecology. Emphasis is placed on understanding the strengths and weaknesses of different ecological methods and analyses in the study of coastal environments. Lecture, field work, and laboratory are integrated, and students gain practical computer experience by analyzing ecological data from the field using software that performs analyses introduced in lecture. Prerequisites: Two semesters of introductory biology, college algebra (or equivalent) and an ecology course.

BIOM 560 Marine Ecology (3:2:3)

This course is a study of the physical parameters of the marine environment as it interrelates with marine organisms. The ecological interactions of the organisms with each other will be emphasized. The effect of pollution and excessive exploitation on marine organisms will be discussed. Will be accepted for General Education.

BIOM 561 Marine Botany (3:2:3)

The taxonomy, physiology, ecology, and economic importance of marine and coastal plants will be considered. Laboratory techniques will include collecting, preserving, identifying and analyzing plants and plant materials; appropriate instrumentation will be used. Emphasis will be given to both in the field studies and laboratory analyses.

BIOM 562 Marine Invertebrates (3:2:3)

This course is a study of the life history, habits, origin, development, physiology, anatomy and taxonomy of the main phyla of invertebrates. A phylogenetic sequence is followed to show interrelationships among the phyla. Special emphasis is given on the Atlantic marine invertebrates. Laboratory and field work deal with collection, preservation and identification of local species.

BIOM 563 Marine Biology Cruise (3:2:3)

This course consists of a three-week session involving detailed planning and preparations for an oceanographic research cruise of approximately eight days, actual execution of the cruise plan on board an ocean research vessel, and data processing and reporting of the cruise results. Shipboard sampling techniques and instrumentation used by biological oceanographers are introduced.

BIOM 564 Developmental Biology of Marine Organisms (3:2:3)

This course deals with the basic principles of development and differentiation in marine organisms at the molecular and supramolecular levels of organization. The laboratory will include both descriptive and experimental embryology.

BIOM 565 Management of Wetland Wildlife (3:2:3)

This course deals with the ecology and management of wetland wildlife with emphasis on the management of wetlands as ecological systems.

BIOM 566 Marine Ichthyology (3:2:3)

This course is a study of the internal and external structure of fishes, their systematic and ecological relationships, and their distribution in time and space.

BIOM 567 Marine Pollution Research Cruise (3:2:3)

Investigations will be conducted before, during and after the dumping with fate and behavior (dispersion and degradation) studies of the pollutants. Bio-assays and other toxicity studies will also be conducted. Procedures, techniques, and equipment will be prepared and standardized prior

to the cruise, and a final project report prepared and submitted for the course grades.

BIOM 568 Marine Ornithology (3:2:3)

This course introduces the student to the avian fauna of the seacoast and at the same time enables comparison with inland species to be found near the laboratory. In addition to the field work providing visual and vocal identification, lecture material will include information on distribution, behavior, physiology and anatomy.

BIOM 569 Field Methods in Oceanography (3:2:3)

This course provides students with a general rationale for and working knowledge of investigative techniques that are used to study the physical, biological, geological, and chemical parameters of the marine environment. Students learn to appreciate the scope of field studies, through active participation in group projects and individual research efforts; these projects include planning and execution, analysis and interpretation of data, and presentation of the results.

BIOM 570 Marine Biology (3:2:3)

This course is a study of plant and animal life in the marine environment. Emphasis will be placed upon physical and chemical factors that affect the marine environments and the ways in which various organisms have become adapted for exploiting marine resources.

BIOM 573 Marine Mammals of the Atlantic (3:2:3)

The distribution, population size, physiology, evolution, adaptation, and ecological relationships of marine mammals will be studied. Laboratory and field work will include an off-campus field trip to facilitate studying marine mammals (Baltimore Aquarium and Woods Hole).

BIOM 574 Introduction to Oceanography (3:2:3)

This course is designed to familiarize the student with the marine environment and current development in the Marine Sciences. Topics for study will include the physical parameter of the ocean; Ocean basic topography; Life in the Sea; and Resources in the Oceans.

BIOM 575 Behavior of Marine Organisms (3:2:3)

Discussions and observations are conducted on the influences of external and internal factors on the regulation and coastal behavior of organisms living in the marine coastal environment. Prerequisite: General Biology.

BIOM 576 Marine Microbiology (3:2:3)

A survey of methods and concepts of marine microbiology. Attention will be given to technical aspects of sample collection, microbial ecology of the marine environment, enrichment culturing, methods of enumeration and identification with emphasis on marine bacteria. Prerequisite: General Microbiology.

BIOM 578 Anatomy of Marine Chordates (3:2:3)

The basis structures of marine chordates will be studied by dissection in order to trace the important trends (and their functional significance) in the evolution of these structures within the various groups of marine chordates.

BIOM 579 Ecology of Marine Plankton (3:2:3)

This course is a study of the phytoplankton and zooplankton in marine and brackish environments. Qualitative and quantitative comparisons will be made between the planktonic populations of various types of habitats in relation to primary and secondary productivity.

BIOM 580 Oceanography (3:2:3)

This course is an introduction to the physical, chemical, biological, and geological processes and interactions in the oceans. Topics include the history of oceanography, charts and navigation, the physical and chemical properties of sea water, instrumentation and at-sea measurements, marine geology, beach processes, theory of continental drift, air-sea interactions, waves and ocean circulation, tides, plant and animal life in the sea, and marine ecology.

BIOM 581 Marine Micropaleontology (3:2:3)

This course is designed for students majoring in either biological or geological sciences; the course will deal with modern, living representatives of microorganisms important in the fossil record. Particular emphasis will be placed on the taxonomy, morphology, evolution and ecologic affinities of the Foraminifera (Sarcodina) but other groups, including the Radiolaria, Diatoms and Ostracods, will also be considered. Laboratory and field aspects of the course will include sample collecting, preparation, and analysis.

BIOM 582 Field Studies in Oceanography (3:2:3)

This course consists of a three week session involving detailed planning and preparations for an oceanographic research cruise of approximately one week duration, the actual research cruise on board the R.V. "Annadale," and the data-processing and final reporting of results. Demonstration of various shipboard sampling techniques and instrumentation will be given. Each cruise will deal with different aspects of marine science, i.e., 1) general oceanography; 2) marine biology; 3) marine geology; and, 4) marine pollution and waste disposal.

BIOM 583 Wetland Ecology (3:2:3)

The structure and function of coastal wetland ecosystems are emphasized. The ecological impact of humans on these wetlands are interrelated with management strategies. Field Exercises are stressed.

BIOM 587 Tropical Invertebrates (3:2:3)

This course emphasizes the systematics and ecology of tropical communities. A variety of collection and observation methods are used to sample tropical inshore and reef areas. Prerequisites: Marine Invertebrates, Invertebrate Zoology, or consent of instructor.

BIOM 588 Coastal Vegetation (3:2:3)

The vegetation under the marine influence is identified and the factors limiting and controlling distribution of this vegetation are determined.

BIOM 589 Physiology of Marine Invertebrates (3:2:3)

Mechanisms and regulation of organ function in invertebrates with emphasis on homeostasis will be studied using live specimens from the marine environment. The unique adaptations of the marine invertebrates will be compared with general physiological principles. Graduate students in the course will develop an independent research project related to a specific aspect of the course. A written and/or oral report on the project will be given.

BIOM 590 Marine Aquaculture (3:3:0)

This course will include the theory and practice of raising organisms for food and for the aquarium trade. Techniques of raising economically important organisms from the egg stage to marketable size and their food supplies will be studied.

BIOM 594 Biology of Molluscs (3:2:3)

The Mollusca is the second largest group of animals and perhaps the most diverse in terms of morphological, ecological and behavioral variations. This course offers an evolutionary, functional, and ecological approach to studying this important group of organisms.

BIOM 572 Coral Reef Ecology (3:2:3)

This course investigates coral reef structure, formation, types and the relationship of reef organisms to their environment. Emphasis will be given to species diversity/identification, symbiosis, and effect of temperature, salinity, light, nutrient concentration, current predation, and competition on the abundance and distribution on coral reef organisms.

Cardiac Rehabilitation and Exercise Science

Courses are found under MSES

Communication Studies

CMST 510 Comparative Media (3:3:0)**CMST 577 Independent Study in Communication Studies (1-3:variable:0)**

Under the direction of a qualified member of the departmental faculty, the student will pursue an advanced program of reading, study, and research related to the understanding and knowledge of communication studies.

Computer Science

CPSC 521 Computer Graphics (3:3:0)

This course is an introduction to computer graphics. Basic principles for design, use, understanding of graphics systems will be studied. Algorithms for creating and manipulating graphic displays and a standard programming language for their implementation will be presented. There will be programming practice. Prerequisite: Ability to program in 'C'.

CPSC 523 Discrete Optimization Algorithms (3:3:0)

This course introduces students to dynamic, linear and integer programming algorithms. There will be programming practice involving these algorithms.

CPSC 524 Image Processing (3:3:0)

Sophisticated image processing and machine vision techniques are now available for an increasing array of industrial, military and medical applications. This course provides fundamentals of image processing, machine vision and various algorithms for their implementation. Prerequisite: MATH 320 or equivalent.

CPSC 525 Expert Systems (3:3:0)

This course is an introduction to knowledge based systems. Basic concepts, characteristics, architectures, and tools will be studied. Major paradigms for synthesis and analysis class systems, and exact and inexact reasoning systems will be discussed. Computational and knowledge engineering issues will be treated by case studies and there will be programming practice.

CPSC 527 Robotics (3:3:0)

This course is an introduction to robotics on a technical level. The history of robotics, computer aided manufacturing, robot components, sensors, programming systems, applications and future implications of robotics technology will be studied. There will be hands-on experience with a robot.

CPSC 528 Artificial Intelligence and Heuristic Programming (3:3:0)

This course is an introduction to artificial intelligence and heuristic programming techniques. Search strategies, games, heuristic mechanisms and automated deduction will be studied. There will be programming practice. For graduate credit, a student will be required to write a term paper or execute a project which reflects deeper investigation of the topics covered in the course.

CPSC 529 Machine Learning (3:3:0)

This course is an introduction to techniques which enable software to improve its performance over time. History and classic experiments will be presented. Programs will be studied which perform rote learning, learn by being told, learn by analogy, learn from examples (induction) and learn by observation and discovery. There will be some programming practice.

CPSC 530 Software Engineering (3:3:0)

This course studies the principles of software engineering and various programming methodologies. Top-down, structured programming will be emphasized and applied to the design and analysis of efficient algorithms. There is also an introduction to computational complexity. For graduate credit, a student will be required to write a term paper or execute a project which reflects deeper investigation of the topics covered in the course.

CPSC 531 Advanced Topics in Software Engineering (3:3:0)

This course will introduce the students to the current theoretical models and approaches used in the design, construction, and management of large, complex systems with long life cycles. Topic areas include requirements specification, design, configuration management, technical reviews, quality assurance, testing and metrics. Case studies will be undertaken to compare the various approaches. Prerequisite: CPSC 530.

CPSC 532 Natural Language Processing (3:3:0)

This course is an introduction to natural language processing in Computer Science. There will be a review of elementary text, tier and graph processing, and an introduction to syntactic and semantic processing. For syntax, Backus-Naur form grammars, sentence generation/recognition, augmented transition networks and parsing strategies will be studied. For semantics, case grammar theory and parsing strategies will be studied. There will be case studies of current systems as well as programming practice. For graduate credit, a student will be required to write a term paper or

execute a project.

CPSC 533 Compiler Construction (3:3:0)

This course is an introduction to the methods and techniques involved in translating high level languages such as 'C' into executable machine code. Lexical scanning, parsing, symbol table construction, object code generation and optimization will be studied and a compiler will be written. For graduate credit, a student will be required to write a term paper or execute a project which reflects deeper investigation of the topics covered in the course.

CPSC 534 Compiler Construction II (3:3:0)

This course is a continuation of CPSC 533. Tools are used to partially automate the construction of a compiler of the level written in CPSC 533. Theoretical and practical models of enlarged compilers are discussed. Students will complete as final projects working compilers which allow for arrays, subprograms, formatted input/output, and other advanced features. Prerequisite: Ability to program in 'C'.

CPSC 535 Parallel Computing (3:3:0)

This course is an introduction to parallel computing, a rapidly growing area of computer science. Principles of parallel computer architecture and parallel algorithms for various applications will be studied. There will be practice in parallel programming. Prerequisites: CPSC 251, 541, MATH 320.

CPSC 541 Computer Architecture (3:3:0)

This course involves the study of computer systems structure, organization, implementation, and performance. Von-Neumann machines, from the early EDVAC to current microprocessors will be considered. Parallel processors and other specialized architectures will also be studied.

CPSC 542 Operating System Design (3:3:0)

This course will thoroughly examine the principles of the design of computer operating systems. Emphasis will be placed on process allocation and scheduling, concurrent programming, memory management, device management, file management and protection. How the principles are implemented in an existing operating system will be examined.

CPSC 544 Realtime Systems (3:3:0)

An introduction to the problems, concepts and techniques involved in computer systems which must monitor and control external devices or events. This includes techniques and hardware for data collection and control functions. Applications discussed will include microprocessor controlled intelligent devices and process control. For graduate credit, a student will be required to write a term paper or execute a project which reflects deeper investigation of the topics covered in the course.

CPSC 545 Networks and Data Communications (3:3:0)

This course examines the characteristics of microprocessors, including integrated circuit technology, architecture, programming, and applications. Specific microprocessors will be studied and programmed. "Hands-On" experience in building and operating microcomputer systems will be provided. Networks and distributed processing will be considered in relationship to microcomputer applications. For graduate credit a student will be required to write a term paper or execute a project which reflects deeper investigation of the topics covered in the course.

CPSC 550 Algorithmic Graph Theory (3:3:0)

This course is an algorithmic approach to the mathematical theory of graphs and their applications. Path problems, covers, network flows and other problems will be formulated in graph theoretical terms and solutions will be programmed. For graduate credit, a student will be required to write a term paper or execute a project which reflects deeper investigation of the topics covered in the course.

CPSC 553 Database Systems (3:3:0)

This course is an introduction to the management of large volumes of interrelated data through integrated database management software. Topics discussed will include relationships between data items, effects of redundancy and database design. Representative examples of the relational and network approaches to database management will be examined. For graduate credit, a student will be required to write a term paper or execute a project which reflects deeper investigation of the topics covered in the course.

CPSC 554 Data Structures and Algorithm Analysis (3:3:0)

This course will analyze a variety of algorithms from the standpoint of what data structures are used and how they are implemented. Students will be introduced to the classes of NP-hard and NP-complete problems and to the theories of complexity analysis.

CPSC 560 Applied Computer Cryptography (3:3:0)

The focus of this course is developing computer algorithms for generating random numbers, symmetric and asymmetric ciphers and cryptographic keys. Programming assignments of stream and block ciphers will reinforce ideas covered in CPSC 325. Students will be required to write basic public-key cryptography code as a final project. Prerequisites: CPSC 325, 251, MATH 220.

CPSC 562 Theory of Computation (3:3:0)

This course will introduce abstract counterparts of physical machines and algorithms. Turing machines and other automata will be presented. The notions of algorithms, computability and un-solvability will be rigorously defined and studied. Some problems not solvable by instruction obeying machines will be examined.

CPSC 563 Theory of Abstract Languages (3:3:0)

This course is an introduction to sets of strings of symbols, their representations, structures and properties. Abstract languages, formal grammars, productions, the Chomsky hierarchy, generation and recognition mechanisms for languages, and the relationship of formal languages to automata will be studied.

CPSC 570 Introduction to Research (3:3:0)

This course will introduce the student to the professional (open) literature as well as other sources in computer science. The student will investigate an area or problem and assimilate, integrate and present the findings in a scholarly seminar. This course may be taken more than once with approval of the department. Prerequisite: At least one course successfully completed at the graduate level in Computer Science.

CPSC 574 Research Project I (3:3:0)

This course will introduce the student to the professional (open) literature as well as other sources in computer science. The student will investigate an area or problem and assimilate, integrate and present the findings in a scholarly seminar. This course may be taken more than once with approval of the department. Prerequisite: CPSC 570.

CPSC 575 Research Project II (3:3:0)

This course is a continuation of CPSC 574 - Research Project-I.

Elementary Education

ELED 502 Psychology of the Elementary School Child (3:3:0)

This course deals with the principles and theories of human development; dimensions of growth; cognitive, social and personality development of the child from five to thirteen; the impact of Sociocultural change on the home and school as these relate to the developing child.

ELED 505 Classroom Management and Discipline Models (3:3:0)

The course will emphasize classroom management from the viewpoint of effective teaching. Specific discipline models will be analyzed and evaluated. Students will assess their philosophies in regard to classroom management practices and discipline models.

ELED 512 Integrating the Arts into Elementary Education (3:3:0)

This course deals with integrating all the arts into the elementary school curriculum with or without arts specialists. It concerns itself with education in, through and about the arts for aesthetic and motivational purposes.

ELED 515 Individualizing Instruction in Elementary Education (3:3:0)

This course will examine individual differences, types of learning styles, and various strategies which are used to individualize instruction. Students will work on individual projects which can be applied directly to their own teaching assignment. Although emphasis is placed on elementary education, many topics will apply on a K-12 basis.

ELED 517 Creative Teaching Methods for the Advanced Student (3:3:0)

This course examines current research in creativity. Students are encouraged to investigate their own creative process and develop strategies for enriching teaching strategies. Best teaching practices for enhancing creativity in the classroom are studied.

ELED 520 Current Trends in Elementary School Language Arts (3:3:0)

This course examines current elementary school language arts curricula, newer approaches to organization of elementary schools and classrooms for implementation of learning in the language arts; modern techniques of teaching, listening, speaking, and written communications; investigation of research studies in elementary school language arts.

ELED 521 Children's Literature for Advanced Students (3:3:0)

This course presents a critical evaluation of materials which will meet the needs of teachers and children in the use of literature in the curriculum. Special attention is paid to the social and personal issues in the child's life and the use of bibliotherapy in the elementary classroom. Emphasis is also placed on building a literature based classroom curriculum.

ELED 523 Diversity in Children's Literature (3:3:0)

This course enhances the learners' knowledge of the uses of children's literature within the elementary classroom. Literature representative of diverse cultural and ethnic groups will be explored, evaluated and utilized. Prerequisite: Completion of an undergraduate or graduate course in children's literature or permission of the professor.

ELED 525 Creative Drama (3:3:0)

This course develops knowledge and skills in using creative drama and theatre activities with children to enhance and assess dramatic learning ability. Dramatic behaviors, theatre skills, imagery ability, imagination, group skills, and the connection between imagination and action are actively explored.

ELED 530 Science in the Elementary School (3:3:0)

This course probes in depth the content and methodology of elementary school science. Emphasis will be given to the development of a classroom science program that will further the child's ability to solve problems logically, objectively, independently, and creatively.

ELED 531 Life Science Workshop for Elementary Teachers (3:3:0)

This course is designed to enhance the teaching of life science concepts in the elementary schools. Participants will experience a variety of hands-on activities and develop a set of activity-based materials for use in their own classrooms. Instruction in environmental education will also be provided.

ELED 532 Physical Science Workshop for Elementary Teachers (3:3:0)

This course is designed to enhance the teaching of physical science concepts in the elementary schools. Participants will experience a variety of hands-on activities and develop a set of activity-based materials for use in their own classrooms. There will also be opportunities to explore the use of emerging technologies such as microcomputer-based laboratories and interactive multimedia.

Workshop Courses**ELED 533 Designing and Implementing Programs for Professional Development (Arranged)**

This workshop will emphasize the knowledge and skills needed for teachers to participate in designing and facilitating their own professional development programs. Teaching styles and activities will be explored, while participants utilize self-assessment to evaluate their needs and establish goals. Strategies for implementation will be discussed.

ELED 534 Seminar in Elementary School Science (3:3:0)

Current issues, problems, research, and theoretical and philosophical aspects of elementary science education are discussed. Prerequisite: Approval of instructor.

ELED 535 Classroom Diversity: Creating a Positive Environment (3:3:0)

This course encourages educators to identify their own values, prejudices, and goals; to examine their thoughts and/or misconceptions about culturally diverse communities. Designed to help them create school climates that celebrate diversity and meet the needs of students of different races, ethnicities, gender, and ability levels.

ELED 540 Mathematics in the Elementary School (3:3:0)

This course places emphasis on recent developments in the teaching and learning of elementary school mathematics. Additional emphasis will be placed on the evaluation of mathematical learning, instruction, and programs. Course participants will also become familiar with the use of technology and how to integrate its use appropriately in an elementary mathematics program.

ELED 542 Current Trends in Elementary School Mathematics (3:3:0)

An investigation and analysis of current local, state, and national mathematics projects and their implications are made. Prerequisite: ELED 540 Mathematics in the Elementary School.

ELED 544 International Collaborative Learning Project (1-3:1-3:0)

This course enables students to participate in a unique learning event in a foreign country. Students will have the opportunity to experience different styles in teaching and learning, how reflective teaching practice can become an integral part of the teaching process, and how teacher education reform occurs in different contexts through seminars and observations. The class will deal with exploring differences and similarities between cultures and philosophies. Prerequisite: Permission of instructor.

ELED 546 Learning to Read Through the Arts (3:3:0)

The workshop prepares teachers to develop and use an individualized reading program designed to improve reading skills through the integration of a total arts program with a total reading program. Upon completion, participants are qualified to adopt the Learning to Read Through The Arts program of the U.S.O.E. National Diffusion Network.

ELED 547 Success-Oriented Reading: Whole Language Development

(Semester hours arranged.)

The workshop provides opportunities for teachers to explore the reading process from a variety of current viewpoints and to help the participants develop their own personal classroom teaching programs to put these ideas into practice. The course is designed to stimulate new thinking, to have participants experience activities that can be used with students, and to give participants confidence in creating personalized reading activities and materials for their own students. Prerequisites: ELED/PSED 581 or ELED/PSED 582.

ELED 549 Reducing Classroom Conflict (Semester hours arranged.)

This workshop is designed to provide participants with skills in developing pathways to build strength and success in themselves and their students. It focuses on specific classroom activities that will help develop a climate for effective self-discipline and positive classroom interaction. Prerequisite: ELED 581.

ELED 550 Current Trends in Elementary School Social Studies (3:3:0)

Participants in this course will review current research in social studies education and discuss current trends in relation to National Standards. Participants will also utilize social studies learning strategies and develop activities consistent with current literature.

ELED 552 Together: Mainstreaming in Schools (3:3:0)

The purpose of the workshop is to cause meaningful interaction of special and regular education teachers. The interaction enables them to review and to develop positive models for their particular schools that allow for exceptional and non-exceptional children to learn together, to respect each other, to know each other. A major emphasis will be to devise, through group interaction, a plan for implementation of mainstreaming in the particular schools.

ELED 553 Teaching and Motivating (3:3:0)

The course provides educators with the theory and skills to motivate students to learn and to accelerate their academic achievement. Brain function and dominance will be reviewed in light

of how these processes result in different student learning styles. Participants will build teaching strategies to deal with learning styles.

ELED 555 The Clinical Supervision of Elementary Student Teachers (3:3:0)

The course participants will examine the objectives of the student teaching program and relate them to the specific roles and needs of both student teachers and cooperating teachers. The primary emphasis of the course will be on developing the skills necessary to work with student teachers using the clinical supervision model. Participants will become effective at accurately collecting data on classroom verbal interaction, teacher non-verbal behavior, questioning techniques, movement patterns, student involvement, student behavior, time allocation, classroom management and teacher effectiveness.

ELED 556 Cooperative Learning (3:3:0)

This course allows educators to explore methods useful in establishing cooperative learning in the classroom. Cooperative learning provides the educators with a framework for maximizing student achievement through the use of critical thinking, problem solving skills, and teamwork. The course will introduce the educator to the fundamentals of control theory as it applies to cooperative learning, and will provide the educator with the opportunity to develop a teaching plan or implementing cooperative learning in the classroom.

ELED 557 Reducing Stress in the Classroom (3:3:0)

This course explores ways to manage stress, establish realistic goals and develop relaxation techniques so that stress is minimized through creative thinking and effective classroom management. The course provides techniques for reducing classroom stress in both teachers and students. Prerequisites: PSED 161, 242.

ELED 559 Enhancing Self-Esteem (3:3:0)

This course will introduce educators to elements of self-esteem and how those elements can be used to establish an atmosphere where high self-esteem and motivation can flourish. This course takes theory of self-esteem and translates it into practice. It also emphasizes basic human relations and interpersonal skills necessary to create a classroom environment conducive to the teaching/learning process.

ELED 560 Adaptive Education for Exceptional Students (3:3:0)

This course is designed for the teacher of the non-specialized class. Emphasizes the skills and understanding necessary for the following: recognition of various forms of exceptionality in children; establishment of good interpersonal relationships; selection and adaptation of suitable curriculum materials, content, and methodology; and awareness of proper procedures in referring exceptional students for specialized help.

ELED 569 Research Laboratory in Early Childhood and Elementary Education (1:0:3)

The preparation of the research proposal includes the development of purpose and design of the proposed research problem or thesis. This course must be repeated until "satisfactory" grade is earned; failure to design an acceptable proposal results in "no record" which carries no credit or penalty. Prerequisite: Completion or concurrent enrollment in ELED 570.

ELED 570 Introduction to Research (3:3:0)

This course is an introduction to the basic principles and major methods used in investigation of educational problems. Attention is given to the significant steps involved in compiling a research proposal. Required of all graduate students in the degree program. In compliance with the graduate school policies, students are advised to complete this course early in their program. Prerequisite: ELED 502; Elementary Education majors only.

ELED 571 Research Problems (Semester hours arranged.)

This course involves the solution of a problem that requires the utilization of research methodology. Emphasis is placed upon the kinds of problems that frequently confront the elementary school teacher in the normal teaching situation. Required of all students in the Non-Thesis program. It may be repeated with permission of the chairman of the program faculty. It requires prior completion of ELED 570.

ELED 572 Thesis (3:0:0)

This focuses on the procedure, analysis and writing of the thesis and includes an extensive study of a problem that merits the utilization of thesis-level investigative skills.

Workshop Courses

ELED 574 Problems and Issues in Early Childhood Education (3:3:0)

This course consists of a review of recent research in early childhood education and an examination of current controversial issues, with an attempt at synthesis.

ELED 575 Graduate Seminar (3:3:0)

This course explores models of assessment and evaluation in education. It also develops the framework and focus for graduate students' degree program comprehensive evaluation. Prerequisites: ELED 570 and completion of at least 18 graduate credits.

ELED 577 Independent Study in Elementary Education

(Semester hours arranged.)

Under the auspices of a qualified member of the faculty of the graduate school the student pursues a pattern of readings, study, and research related to professional knowledge and understanding in elementary education. Topics should be established prior to enrollment. Prerequisite: Approval of the Department Chairperson.

ELED 580 Guidance in Elementary Education (3:3:0)

This course emphasizes that the teacher is a focal point and primary source of guidance in the elementary school. Supportive functions of the supervisor, principal, nurse, elementary school counselor, psychologist, community service agencies, and mental health agencies are examined. Procedures for referrals and typical case reports are studied. Emphasis is placed on preventative measures through early recognition and treatment of children needing special guidance services.

ELED 581 Introduction to Schools Without Failure (Semester hours arranged.)

The workshop is built on involvement, relevance and thinking. Much time is devoted to attitudinal change, communication skills, group processes and problem solving. The focus is on meeting the needs of the individual school. Its purpose is to assist school personnel to develop a positive, personal philosophy of education; to present a process for developing classroom skills and procedures; to implement a success-oriented curriculum and to provide ways for building constructive communication within the school and between the school and the community.

ELED 582 Discipline in the Classroom (Semester hours arranged.)

This workshop is designed for participants to take part in learning activities that will enable them to develop positive techniques for preventing and handling student behavior problems.

ELED 583 Theory and Practice of Schools Without Failure I (Excellence In Teaching) (Semester hours arranged.)

This workshop offers participants an opportunity to investigate the effects of school success and failure on the life of a child. Study of these concepts will be taken from the points of view of William Glasser, M.D., in his books *Schools Without Failure*, *Identify Society and Reality Therapy*. Participants will be introduced to a hybrid teaching style designed to elevate teaching to maximize learning in the classroom.

ELED 584 Theory and Practice of Schools Without Failure II (Perception Psychology) (Semester hours arranged.)

Educators will gain experience in conducting diagnostic class meetings and in providing the educational climate necessary for self-discipline. Curriculum planning related to self-directed learning will be explored. Recent advancements in brain research, psychology and learning theory will be presented.

ELED 585 Planning for Change (3:3:0)

The goals of quality education will be analyzed as a basis for curriculum change. The relationship between affective education and cognition will be reviewed and assessed through a group process. Systems for change will be developed utilizing personal influence and power. The workshop also helps participants acquire additional skill in expanding their knowledge and use of Reality Therapy in the educational environment.

ELED 586 Internship: Methods and Materials in Early Childhood

Education (6:3:12)

This course consists of practical experience in a laboratory situation with young children. Emphasis is on understanding behavioral patterns of young children, development of insight into various theories and methods in early childhood education, and familiarization with varied materials. Prerequisite: Approval of Department Chairperson.

Workshop Courses**ELED 589 Organization and Administration of Early Programs (3:3:0)**

This course emphasis is on organization and administration of high quality preschool programs; including supervising, staffing, housing, equipment, programs, records, financing and budgeting, and parent involvement. The course is directed toward prospective early childhood teachers and day care center personnel.

ELED 592 Elementary School Curriculum (3:3:0)

This course will center around a survey of the elementary school curriculum with emphasis on fundamental principles of curriculum development. Historical materials related to the curriculum are used to illustrate trends and innovations. Attention will be given to articulation in curriculum.

English

ENGL 503 Shakespeare: Advanced Studies (3:3:0)

This course is intended to enhance the student's knowledge of comedies, tragedies, and histories of Shakespeare besides the handful taught and retaught in our schools. Students will also study recent Shakespearean criticism.

ENGL 512 Teaching of Writing in the Secondary Schools (3:3:0)

This course will briefly survey the history of the teaching of writing in American secondary schools, intensively review writing process theory and research of the past two decades and critically consider the implications of writing process theory and research for classroom practice. This course is also listed as PSED 512.

ENGL 515 Computers and Writing (3:3:0)

Computers and Writing will examine the impact that the new forms of electronic writing have had and will have on conventional print-based writing. We will analyze various forms of electronic writing such as the World Wide Web, e-mail, listservs, newsgroups, MOOs.

ENGL 554 British Literature - New Perspectives (3:3:0)

This graduate course will provide new perspectives for the study of British literature. The new perspectives will include recent critical theories, fresh contexts, and reconceived canons. The emphasis and period(s) considered may vary each semester the course is offered.

ENGL 560 Studies in Folklore (3:3:0)

This course combines analysis and discussion of folklore theory with field collection of traditional narratives to train students to recognize genuine folklore and its features.

ENGL 562 American Literature - New Perspectives (3:3:0)

This graduate course will provide new perspectives for the study of American literature. The new perspectives will include recent critical theories, fresh contexts, and reconceived canons. The emphasis and period(s) considered may vary each semester the course is offered.

ENGL 563 Studies in Contemporary Literature (3:3:0)

This graduate course will consider the major intellectual and aesthetic developments in recent literature. Each semester it is offered, the instructor will choose one particular genre, group of writers, or new literary development and concentrate on it for intensive study.

ENGL 564 Contemporary Literary Theory for Teachers (3:3:0)

This course will consider major developments in recent literary theory and seek to apply them to realistic pedagogical methodology concerning the reading and writing of literature in public schools.

ENGL 565 World Literature-New Perspectives (3:3:0)

This course is an examination of literature other than British and American, such as African, Asian, Native American, Middle Eastern, Classical, South American, Caribbean, European. The instructor may choose to examine a particular literary tradition, the literary points of view of a region, a theme running through several literary traditions, or a particular way of reading and responding to a body of literature.

ENGL 566 Teaching Multicultural Literature (3:3:0)

The English/Education major will utilize a seminar setting to focus on a detailed consideration of current multicultural subject matter, theory, and strategy that may be effective in the multicultural classroom. Prerequisites: ENGL 162 or ENGL 163 OR completion of undergraduate degree, AND completion of, or concurrent enrollment in, ENGL 292.

ENGL 577 Independent Study in English (Semester hours arranged.)

Under the auspices of a qualified member of the departmental faculty, the student pursues a pattern of reading, study and research related to the understanding and knowledge of English.

General Science

GSCI 501 Laboratory and Classroom Techniques in Science Teaching (3:3:0)

This course is designed toward the practical aspects of effective science instruction. It deals with the means and devices employed in the instructional process. Simulated classroom situations are developed and prepared by the student representative of imaginative science teaching.

GSCI 502 Contemporary Topics in Science (3:3:0)

This course deals with the nature and theoretical basis of recent noteworthy advances in science. Interdisciplinary in design, the course draws its content from the various disciplines of the natural sciences. Emphasis is placed upon topics being reported upon in professional journals in advance of their textbook presentations.

GSCI 504 Introductory Astrophysics (3:3:0)

This is a course in modern astrophysics stressing the application of physical concepts to the study of the heavens. Topics will include radiative transfer, astrophysical radiative processes, stellar structure and evolution, compact stars and black holes, galactic and extragalactic astrophysics and cosmology. Prerequisites: PHYS 121, PHYS 262 and MATH 141.

GSCI 512 Contemporary Topics in Biochemistry (3:3:0)

This course will elaborate on the chemical principles fundamental to understanding biochemical processes and their regulation. Topics covered may include enzyme mechanisms and kinetics, molecular aspects of signal transduction, organization and maintenance of the genome and regulation of gene expression and recombinant DNA techniques. Reading of current journal articles, class discussions, and oral presentations will be integral components of this course. As a contemporary topics course, students may take this course during a different semester for an additional 3 credits. Prerequisite(s): Students should have had a previous course in biochemistry such as CHEM 315, 317.

GSCI 520 The Development of Modern Physical Science (3:3:0)

This course examines the past works and philosophical thought of noted physical scientists. Emphasis is placed on the nature of scientific discovery and the processes of science.

GSCI 521 Statistical Physics (3:3:0)

Large scale Thermodynamic systems are studied by taking averages over numerous important parameters pertinent to statistically treatable systems. Topics include: characteristic features of macroscopic systems, statistical description of systems of particles, microscopic theory and macroscopic measurements, general thermodynamic interaction, elementary kinetic theory of transport processes.

GSCI 522 Thermal Physics (3:3:0)

This course deals with heat and thermodynamics and application to special systems; kinetic theory of gases and statistical mechanics; fluctuation and transport processes.

GSCI 524 Physical Measurement (3:2:2)

This course is designed for those in industry and for students whose responsibilities include or will include measurement (inspection, design, etc.) and for in-service teachers whose work will be enhanced by greater insight into these areas which are included in the syllabus.

GSCI 525 Electromagnetic Theory I (3:3:0)

An application of Maxwell's equations to problems in electrostatics and electrodynamics, including boundary value problems with dielectrics and conductors is presented.

GSCI 526 Electromagnetic Theory II (3:3:0)

Students study the propagation of electromagnetic waves, wave guides, antenna theory, and physical optics.

GSCI 530 Energy Resources and Applications (3:3:0)

This course develops the history of present energy dependence of the U.S. and some foreign countries. It will also develop the underlying physics concepts. A number of future scenarios are investigated numerically and carefully. Use is made of the WAES report and the ECOMSETS computer projections.

GSCI 531 Organic Chemistry (3:3:0)

This course deals with the theoretical and practical aspects of mechanisms and stereochemistry as applied to the reactions and syntheses of organic compounds.

GSCI 533 Physical Organic Chemistry (3:2:3)

This course is a survey of physical organic chemistry including reaction mechanisms, structure-reactivity correlations, and organic photochemistry. Laboratory experiments will stress the use of modern instrumental techniques in the elucidation of structures and mechanisms.

GSCI 536 Medicinal Chemistry (3:3:0)

This course is a survey of the various classes of pharmacological agents being utilized in the treatment of various disorders. Included are considerations of mode of action, design and synthesis, and current efforts in the field of development of new drugs. Graduate students will be required to complete a paper in addition to other assignments.

GSCI 541 Analytical Chemistry I: Quantitative (4:2:4)

This course is a study of the theories and methods of gravimetric and volumetric analysis with a brief introduction to the use of some modern analytical instrumentation. Precision and accuracy in laboratory work and training in chemical calculations are emphasized.

GSCI 542 Inorganic Chemistry (3:3:0)

Structural and bonding principles, type of reactions, reaction mechanisms and their chemical interpretation will be introduced. The descriptive chemistry of selected elements and their inorganic compounds will be discussed.

GSCI 543 Environmental Quality (4:3:3)

This course deals with the chemical aspects of environmental quality. Emphasis is placed on the identification, chemical characterization and controls of pollutants. Topics include air, water, pesticides, food additives, and solid waste.

GSCI 546 Seminar: Curricular Trends in Science (3:3:0)

This course is a study of the current effort in science curriculum design. Major curricular projects in the various sciences are explored in terms of philosophy, objectives, and content selection. Research and pertinent periodical literature in the curricular aspects of instruction in the sciences are examined.

GSCI 547 Workshop in Science Teaching (Semester hours arranged.)

This course is directed toward the practical aspects of effective science instruction, providing for firsthand participation in real or simulated teaching situation. The course is characterized by an updating of the student's background in specific areas of science teaching and the development of the skills, theory, and techniques necessary to implement recent curricular developments.

GSCI 548 Teaching Science for Involvement - A Cooperative Approach (3:3:0)

This is an activity-oriented course aimed toward the development of competence and confidence in the science underlying *practical* applications. A major concern is the development of science literacy through group interaction and experience with practical equipment. The course is designed for those interested in both secondary and elementary school science teaching.

GSCI 549 Environmental Science (3:3:0)

This course deals with the chemical and physical aspects of the identification, characterization, and controls of pollutants. Topics include air, water, radiation, pesticides, food additives, solid waste, and toxic substances. Prerequisites: CHEM 124, 126 or equivalent.

GSCI 551 Selected Topics: Chemistry (3:3:0)**GSCI 552 Selected Topics: Physics (3:3:0)****GSCI 553 Selected Topics: Biology (3:3:0)****GSCI 554 Selected Topics: Earth Science (3:3:0)**

Emphasis is placed upon the development of scientific content and theory. The course work will include coverage of traditional course offerings from within the disciplines most relevant to the contemporary aspects of the science, complemented by a critical view of certain of the discipline's basic tenants.

GSCI 555 Physical Chemistry: Quantum Mechanics (3:3:0)

This course is a study of selected topics in theoretical chemistry including quantum mechanics, group theory and symmetry, and chemical bonding including molecular orbital theory. The use of computer programs in the illustration of chemical principles will be emphasized. Cross-listed as CHEM 452. Graduate students must complete a research paper or project. Prerequisite: CHEM 353 or permission of instructor.

GSCI 561 Analytical Chemistry II: Instrumental (4:2:4)

This course is a study of principles and applications of modern analytical methods with emphasis on physicochemical measurements. Topics include potentiometry, plarography, chromatography, conductometry and spectroscopy.

GSCI 565 Polymer Chemistry (3:3:0)

The basic concepts of polymer chemistry are introduced in this course. Topics included will be the mechanics and kinetics of polymerization, the synthesis of polymers and the relationships between molecular structure, conformation and morphology of polymers and their chemical and physical properties.

GSCI 570 Introduction to Research (3:3:0)

This course is an orientation to graduate study and research designed to acquaint the student with the methods and materials of graduate study. It is required of all graduate students in a degree program.

GSCI 571 Independent Research Problem (Semester hours arranged.)

This course deals with the utilization of selected research techniques to attack a specific problem. Preparation and presentation of a formal report. It is required of all students in the non-thesis program. Requires prior or concurrent completion of GSCI 570.

GSCI 572 Thesis (3:0:0)

This course focuses on the development of the thesis problem and design of experiment, collecting of data, analysis and organization of data and writing of the formal thesis report.

GSCI 573 Thesis II (3:0:0)

See GSCI 572. This course is concerned with completing the thesis to the satisfaction of the student's Advisory committee. GSCI 572 is a pre- or corequisite.

GSCI 577 Independent Study in General Science (Semester hours arranged.)

Under the auspices of a qualified member of the faculty of the graduate school the student pursues a pattern of readings, study, and research related to professional knowledge and understanding in General Science. Topics should be established prior to enrollment. Prerequisite: Permission of the chairperson of the graduate faculty in general science.

GSCI 580 Radioisotopes (3:2:3)

Studies of the origin of nuclear emissions, properties of nuclear radiation will be discussed. Measurements of their properties such as absorption and attenuation coefficients will be made. Skill in the use of the single and multichannel analyzers will be developed and used in determining nuclear spectra. Reading of current publications in the field will be essential to the essence of this course. An experimental project or paper will be required of all graduate students.

GSCI 581 Quantum Physics (3:3:0)

The wave nature of the universe and its probabilistic interpretation are considered. Topics include Postulates of Quantum Mechanics, the one dimensional Oscillator, the Hydrogen atom, the Pauli principle and Atomic Spectroscopy.

GSCI 591 Special Problems in Physics (3:3:0)

This course introduces the student to detailed and complete treatments in problems which require expertise from several areas.

GSCI 593 Atomic and Nuclear Physics (3:3:0)

This course examines the quantum-mechanical basis of atomic and nuclear structure, and studies the phenomena of atomic and nuclear transitions. Topics covered: Nuclear models, nuclear decay, nuclear reactions, elementary particles.

Health Education

HLTH 505 Non-Medical Healing Arts (1:1:0)

This course examines the role of Osteopathy, Acupuncture, Faith Healing, and other health services which deviate from or compete with “Medicine” in relation to health education. The social and legal issues concerning these services, reliability of sources of information about the services, and the role of the health education in utilization of these services are studied. Focus of the course will be on the development of guidelines for utilization of these services.

HLTH 506 Analysis of Health Information (1:1:0)

This course is an overview of the use and misuse of statistics, the manipulation of human needs and drives, and the provision of false and misleading information by providers and suppliers of health products and services. All major sources of information related to consumer health will be examined for inherent biases and common forms of misinformation.

HLTH 507 Trends in Dieting (1:1:0)

This course is a study of the issues surrounding popular health foods and diets. The desirable and undesirable qualities of “natural” and “organic” foods, “exotic” foods, and nutrient enriched foods are examined. The advantages and disadvantages of diets emphasizing specific nutrients or types of foods, crash diets, drug aided diets, and diets for specific purposes are also studied. Focus of the course is on development of guidelines for evaluating information and sources of information.

HLTH 508 Women’s Health Concerns (3:3:0)

This course is designed to address unique health concerns of women in today’s society. Specific topics such as alcoholism, anorexia nervosa, pre-menstrual syndrome (PMS), domestic violence, child abuse, rape, menopause and many others will be included.

HLTH 509 Health Counseling (1:1:0)

The purpose of this course is to provide health professionals with the knowledge of counseling theory and skills of counseling techniques to improve the quality of healthcare, facilitate health-related decision-making and the enhancement of relationships between client and the health professional.

HLTH 530 Nutrition Across the Life Span (3:3:0)

This course will emphasize the application of nutrition theory across the lifespan, highlighting exercise and weight control, disease prevention, pregnancy and infancy, childhood, adulthood and the senior years. An opportunity to examine nutrition curricula for public school teaching will be provided.

HLTH 531 Instructor Training for Classroom Emergency CARE (3:3:0)

This course provides educators with the necessary basic skills and knowledge to appropriately respond to emergency situations that might arise within the classroom and other school environment. In addition to technical skill development, the focus of this course is on teacher training skill development. Information and materials are provided to enable educators to implement emergency care content into related health areas. There is also an opportunity to become certified in standard first aid and instructor authorization in CPR.

HLTH 532 Death and Dying Education (3:3:0)

This course is designed to increase awareness and develop appropriate values, attitudes, and behaviors concerning death. Special emphasis will be placed on providing educators with information and materials which will enable them to implement death and dying content into related health areas.

HLTH 533 Alcohol, Drugs and Narcotics Education (3:3:0)

This course is designed to provide an insight into the nature, extent and significance of the drug problem in society. In-depth consideration will be given to the pharmacological, psychological, and sociological and legal aspects of drugs. Special attention will be devoted to the topics of: alternatives to drug use, communication techniques, community organizations and resources for rehabilitation and treatment of drug users, curriculum in drug education for grades K-12, review of drug education media, and principles and procedures for developing community programs for effective drug education.

HLTH 534 Sex Education in Schools (3:3:0)

The development, present status, and trends of sex education in school programs and in the community with reference to social values and attitudes are presented. It includes attention to the development of organized programs, resources, and materials.

HLTH 536 Seminar: Health Education (3:3:0)

The course is an individual and group study of problems and materials in personal, school, and community health.

HLTH 537 Community Health Practice for Health Educators (3:3:0)

The course is a study of the theory and principles of community health practice and the application of those principles to contemporary health organization and problems. Approaches to successful community health practice are examined with the various factors that influence or are influenced by community health education programs.

HLTH 538 Public Health Administration (3:3:0)

This course is designed to provide the student with a comprehensive background in public health legislation, organization, and programming. Emphasis is placed on the dynamic nature of public health within the total physical, social, economic and political context.

HLTH 539 Health Education Methods Workshop (3:3:0)

This course is a study of teaching strategies for health education and their application to various settings. Students will develop teaching modules for implementation.

HLTH 540 Behavior Modification in Health Education (3:3:0)

This course is an overview of the major principles of behavior modification as they relate to health education in both theory and practice. It examines theory in relation to current issues of education in general and health education in particular. Applications of principles are studied in the context of health programs specifically designed as behavior modification programs and in the context of health programs which contain behavior modification principles but were not designed with these principles in mind.

HLTH 542 HIV and AIDS Prevention and Education (3:3:0)

This course is designed to provide a comprehensive overview of HIV and AIDS infection in Pennsylvania, New Jersey, and the United States. The course will provide information on recent research on modes of HIV transmission and risk reduction strategies. Particular emphasis is placed on the design and evaluation of HIV prevention and education programs geared toward high risk populations including youth, women, and minorities.

HLTH 544 Health Promotion Programs and Aging (3:3:0)

This course will emphasize health promotion programming for elderly populations. Social and demographic factors will be addressed in regard to health education's role in the aging process. Healthful aging will be examined and discussed from a public health and social health perspective with a primary focus on developing and implementing programs that enhance the health of the elderly.

HLTH 550 School Health Administration and Curriculum (3:3:0)

The purpose of this course is to assist the student in more thoroughly understanding the administration of the school health program and the content, structure, and development of the

health education curriculum. Emphasis is placed upon a comparison of the conceptual approach to other approaches for curriculum development.

HLTH 551 Health Resources and Service Planning and Management (3:3:0)

Students are introduced to the principles, logic, and history of health resource allocation and health services planning, and the fundamentals of health systems management. Each student learns how to use appropriate health data tracking systems, and to apply and evaluate these systems in practical settings.

HLTH 552 Health Budgeting and Fiscal Management (3:3:0)

Students will become acquainted with macro- and micro-economic factors influencing the health care industry, and how these factors influence health budgeting and fiscal management of health service organizations. Students learn budget-making and the budgetary process in public and private health services; capital development and planning; and, the procedures of fiscal management as administrative control.

HLTH 553 Health Ethics, Policy and Law (3:3:0)

The student learns how professional, ethical, constitutional, legal, and governmental aspects of health influence the administration of health service organizations, the formation of health policy, and the planning of health services.

HLTH 555 Health Education Evaluation (3:3:0)

This course is designed to familiarize students with the methods of evaluation used in health education and the implications for student evaluation and program planning. A strong emphasis is placed on the development of various types of instruments of evaluation used in health education. (Prerequisite: Statistics)

HLTH 556 Qualitative Methods in Research and Evaluation for Health Education (3:3:0)

This course is a review of the use of qualitative methodology in research and evaluation of Health Education. Emphasis of the course is on the use of these methodologies to enhance student understanding of the physical and social dynamics (ecology) which influence Health Education planning and implementation. The course will also include skill development for selected techniques.

HLTH 557 Computers in Health Education (3:3:0)

This course provides health education professionals with selected PC-compatible software packages that are being used in a variety of professional settings where community and school-based health education and promotion are being conducted. Particular emphasis will be placed on the application of various health promotion software packages to conduct health risk appraisals, stress assessment and reduction, nutrition assessment and life skills training. In addition, the course will provide an introduction to the application of spread sheets and statistical software in assessing program effectiveness of community and school-based health education intervention.

HLTH 560 Scientific Foundations of Health Behavior (3:3:0)

This course is designed to familiarize students with the health sciences related to health education and promotion, and to provide experiences in the use of the literature related to the health sciences. The primary focus of the course is on human behavior as it influences health and is influenced by health education and promotion programs.

HLTH 561 Epidemiology (3:3:0)

This course is a study of the principles and methods of epidemiological investigations for human health problems. The incidence and prevalence of both infectious and non-infectious health problems are covered. Emphasis of this course is on student application of the principles of epidemiology.

HLTH 562 The Physical Environment and Community Health (3:3:0)

This course reviews traditional and evolving public health concerns related to the physical environment. Major areas of concern are: solid waste, housing, water, air, accidents, good sanitation, overpopulation, and global concerns.

HLTH 565 Occupational Health Education and Promotion (3:3:0)

The course is an application of health education and promotion strategies to the work place. Emphasis is placed in developing student skills for design of programs in occupational settings. An overview of existing programs is included. Students will be expected to apply course material to a specific industrial situation.

HLTH 570 Introduction to Research (3:3:0)

This course is an orientation to research in health education. The emphasis is on developing and interpreting research projects with particular concern for the implications of design, methods and procedures. Students are expected to demonstrate research skills by developing a research proposal and presenting the proposal in a scholarly manner.

HLTH 571 Health Education Research Problem (Semester hours arranged.)

This experience is designed to acquaint the student with recent methods of health research. Tasks will include the completion of an acceptable research report. (Prerequisite: HLTH 570)

HLTH 572 Health Education Thesis (Semester hours arranged.)

This experience consists of doing research for and writing of a thesis concerning a significant problem in health education. (Prerequisite: HLTH 570).

HLTH 577 Independent Study in Health Education (Semester hours arranged.)

With the guidance of a member of the Graduate Faculty of the Health Department, the student pursues a pattern of readings, study, and research related to professional knowledge and understanding in health science. Topics should be established prior to enrollment. (Prerequisite: Health Department graduate faculty approval).

HLTH 580 State Level Cardiopulmonary Resuscitation Instructor's Training (1:1:0)

This course is designed to train the student in proper techniques and procedures in emergency measures in cardiopulmonary resuscitation. The course is recognized by the American Heart Association, Pennsylvania Affiliate.

HLTH 586 Field Experience and Internship (Semester hours arranged.)

This course consists of the practical experiences obtained through supervised work in the school or community. The credits and hours of the experience shall be based on the students experience and programmatic needs; however, no more than 3 credits may be applied to health education degree programs.

History

HIST 501 Colonial America (3:3:0)

This course is a study of the founding and growth of English, Spanish and Dutch colonies in North America. Special attention will be given to motives behind European expansion and the development of institutions and trends, which later contributed to the formation of the new nation.

HIST 502 Era of Jacksonian Democracy (3:3:0)

This course is an intensive study of the age of Jackson, 1818-1848; expansion, sectionalism, social and political reform; emphasis on analysis of original documents.

HIST 503 American Progressivism (3:3:0)

This course is a study of conditions underlying the progressive aims. It investigates major domestic problems of the late 19th and early 20th centuries within the framework of the emergence of the United States as a major power in the world and the impact of Progressivism.

HIST 504 Normalcy and the New Deal (3:3:0)

This course is a study in depth of American domestic trends during the contrasting "Prosperity" and "Depression" decades with special attention to the changing socioeconomic scene. The rich primary source materials available for this period will be used in individual projects.

HIST 505 The Rise of the New Nation (3:3:0)

This course is a study of the War of Independence, and the political, social, and economic foundations of the new nation.

HIST 507 History of American Ideas (3:3:0)

This course consists of readings about selected ideas that motivated American thought and action from the colonial period to the present day. Changes in meaning of older American ideas will be examined.

HIST 508 Seminar: Civil War and Reconstruction (3:3:0)

This course consists of research in selected topics related to the coming of the Civil War, military and diplomatic phases of the Civil War, presidential vs. congressional reconstruction.

HIST 509 U.S. Constitutional History and Law (3:3:0)

This course investigates distinguishing aspects of the American constitutional system; Judicial processes and decisions of major cases of the Marshall and Taney courts; Interpretation of the fourteenth and other amendments; and evaluation of the contemporary court.

HIST 511 Seminar: Pennsylvania History (3:3:0)

This course is an intensive study of Pennsylvania as a colony and a state; its economy, politics, society, and culture; emphasis is on research and analysis.

HIST 514 The Classical Mediterranean (3:3:0)

This course is a study of the political, social and economic development of the Greek and Roman worlds.

HIST 517 French Revolution and Napoleon (3:3:0)

This course will cover the “ancient Regime” and the forces that led to its destruction, the revolution’s impact upon Europe, and the change affected by Napoleon in France and Europe.

HIST 519 Nationalism And Democracy In 19th Century Europe (3:3:0)

This course analyzes the movements of liberalism and nationalism from the Congress of Vienna in 1814 as forces changing the political, economic, and social institutions of 19th Century Europe.

HIST 520 Area Studies I (3:3:0)

(A specific area will be announced). This course examines selected problems of historical and political development in major world areas. Emphasis is placed on political institutions-their background, development and significance.

HIST 521 Area Studies II(3:3:0)

Same as Area Studies I.

HIST 522 Seminar: Foreign Travel and Study (6:0:12)

This course is a study at foreign colleges and universities in the history and government of the countries visited; their economic growth and integration. Emphasis is placed on formal and informal discussion and analysis of contemporary indigenous problems.

HIST 526 American Naval and Maritime History (3:3:0)

This course surveys the maritime and naval development of the United States from colonial to the present time. Emphasis will be placed on the growth of American merchant shipping and naval power and its relationship to political, economic, military, and cultural developments.

HIST 527 The United States Since 1940 (3:3:0)

This course examines political, economic and social changes in the United States from 1940 to 1980. World War II, the Cold War, the Vietnam War, and cultural changes of the 1960’s and 70’s are the foci of this course.

HIST 533 Ancient Civilization (3:3:0)

This course is a study of the origins of Western Civilization as manifested in the political, social, artistic, religious, scientific, philosophical, and literary achievement of the ancient Near East and the Mediterranean.

HIST 534 Origins of the British Welfare State (3:3:0)

A study of the social, economic and political development of the British reform tradition as an answer to the conditions created by the first Industrial Revolution. It will focus primarily on the 19th century but will continue to trace the development of the welfare state up to the present.

HIST 535 Britain in the Age of Discovery and Revolution 1485-1715 (3:3:0)

The course will present a detailed study of the political, diplomatic, economic and social aspects of British Society between 1471 and 1714. Particular emphasis will be placed on the monarchy, Parliament, the Revolutions of the 17th Century and the emergence of Britain as a Great Power.

HIST 536 Twentieth-Century Britain (3:3:0)

From the peak of imperialism in 1900 the course will trace the Liberal revival, the coming of the First World War and its impact on Britain, the coming of democracy, economic and political problems of the Inter-War Period, World War II and its aftermath will be examined as a case study

in national decline. Britain's entry into the European community will be assessed.

HIST 537 Europe in Crisis-1914-1939 (3:3:0)

This course is a study of the problems related to War-Guilt and responsibility, conduct of the war, peace making in Paris, the League of Nations era, and the rise of authoritarian ideologies and governments-Bolshevism, Fascism and Nazism.

HIST 539 Europe In Crisis-1939-1989 (3:3:0)

This course is a study of the origins and conduct of World War II, division of Europe by the Iron Curtain, Cold War politics, dissolution of the European colonial empires, Common Market and unification of Europe, break-up of the Soviet orbit and the era of détente.

HIST 540 Problems in Russian and Soviet History (3:3:0)

This course is a study of selected major problems in Russian and Soviet history: origins and expansion of the Russian State, Russian imperialism, Russian culture, pre-Revolutionary movements, the Bolshevik revolution, the Stalinist period and more recent developments.

HIST 541 Twentieth Century Imperialism (3:3:0)

A study of the "New Imperialism" of the late 19th and early 20th century and its decline in the post World War II era. The course will also focus on the military, social, economic nature of imperialism and the emergence of a neo-imperialism since 1945.

HIST 545 China in Revolution (3:3:0)

After a brief examination of the nature of traditional China, the course deals with the Revolutionary upheaval that has followed the overthrow of the Empire in 1912. The development of the Kuomintang movement, the rise of the Chinese Communists and the struggle for power. Particular emphasis is placed on the people's Republic since 1949 and its problems and accomplishments.

HIST 570 Introduction to Research: Historical Methodology and Research (3:3:0)

This course is a study of the work of renowned historians, techniques of research in history; training in the critical handling of primary and secondary resource materials, and formal presentation of the results. It is required of all graduate students in history degree programs.

HIST 571 Independent Research Problem (Semester hours arranged.)

This course utilizes selected historical research techniques to attack a specific problem. A formal report is prepared and presented. It is required for all students in the non-thesis program.

HIST 572 Thesis I (3:0:0)

This course consists of development of a thesis topic; gathering of information; organization of material; evaluation of data; writing of a formal thesis report.

HIST 573 Thesis II (Semester hours arranged.)

See HIST 572. This course consists of completion of the thesis. Emphasis on originality; depth of research and contribution to knowledge.

The following congeneric course requires permission of the Chairperson of the graduate faculty in order to be included for credit in the degree program.

HIST 577 Independent Study (Semester hours arranged.)

Independent study is designed to provide in-depth coverage of subject matter not covered in courses offered by the department and must be justified to meet a specific need. A student wishing to take independent study should discuss the plan first with his Adviser and then with a member of the department. If a faculty member agrees to supervise the study, the proposal will be submitted to the chairperson of the department. The chairperson, after acting on the proposal, shall present it to the department for action. It will then be transmitted to the Dean of the Faculty.

Hotel, Restaurant and Tourism Management

HRTM 588 Research Skills in Psychology and Hospitality (Semester hours arranged.)

This course provides students with an opportunity to participate in a variety of hospitality research projects undertaken in conjunction with establishments and organizations in the Hospitality and Travel Industry.

Health and Physical Education

Courses can be found under MSES

Mathematics

MATH 502 Applied Statistics (3:3:0)

This course deals with the interpretation and application of elementary statistical techniques, and the solution of problems relative to correlation, inference, prediction, and analysis of variance.

MATH 516 Biometry (3:3:0)

This course deals with the application of various statistical techniques, chiefly the analysis of variance and methods of regression and correlation, to solving various problems in biology. Prerequisites: MATH 311 or MATH 502.

MATH 520 Number Theory (3:3:0)

This course includes a consideration of the fundamental laws of integers, the linear Diophantine equation, the Euclidean algorithm, prime numbers, divisibility, congruences, the Theorems of Fermat and Wilson, primitive roots, and indices.

MATH 530 Trends in Secondary Education (3:3:0)

This course will examine current and proposed secondary mathematics curricula and models of teaching and learning mathematics. Major foci will be mathematical problem solving and integrating technology into the mathematics curriculum.

MATH 531 Teaching Mathematics Using Technology (3:3:0)

Designed for in-service secondary mathematics teachers, this course will cover the use of graphing calculators, computer algebra and geometry systems, how to incorporate them into the classroom and how the availability of technology will change the mathematics that will be taught.

MATH 551 Transformational Geometry (3:3:0)

Introductory transformational geometry for teachers of mathematics will be covered. The transformations are over the 2-Dim and 3-Dim extended Euclidean Spaces. The transformations will be classified and factored by their invariants. The computer software, Mathematica™ or similar software will be used to do the linear algebra. Applications will be made to computer graphics.

MATH 570 Numerical Methods I (3:3:0)

This course will develop the numerical algorithms and error estimates for finding roots, solving equations and curve fitting. The emphasis is on algorithms with good error characteristics and reduction of round off error. Prerequisites: MATH 320, MATH 240, and CPSC 111 or CPSC 211.

MATH 571 Numerical Methods II (3:3:0)

This course is a continuation of the Numerical Methods I and deals with algorithms for interpolation, differentiation, integration, ODE and foreign values.

MATH 577 Independent Study in Mathematics (Semester hours arranged.)

Under the guidance of a qualified faculty member, the student pursues a program of readings, study, and research related to professional knowledge and understanding in Mathematics. Topics should be established prior to enrollment. Prerequisite: Permission of the chairperson of the Department of Mathematics.

Media Communication and Technology

MCOM 501 Current Applications (1:1:0)

This course will provide an introduction to future and current issues and topics in THE APPLICATION of media communication and technology. To highlight communication issues, students will be exposed whenever possible to varied presentation strategies. The application of media communication and technology to academic and business situations will be demonstrated. This course may be taken for credit more than once if a student wishes to study another current

issue.

MCOM 510 Computers in Education (3:3:0)

This course presents an overview of the application of computers to various instructional and classroom administrative tasks. Instructional programs used in all levels of instruction are analyzed. Special emphasis is given to microcomputers and their impact on education.

MCOM 520 Selection and Utilization of Instructional Media for the Classroom (3:3:0)

Techniques of integrating non-print instructional media into the teaching/learning situation are investigated. Emphasis is given to the evaluation, selection and use of films, filmstrips, slides, overhead transparencies and other forms of non-print media.

MCOM 532 Digital Photography and Still Images (3:3:0)

This course will provide students with an overview of many different methods for selection, production, manipulation, utilization and presentation of still images for instructional applications. Students will learn varied techniques of locating, acquiring, and producing digital and non-digital still photographic images.

MCOM 534 Video Production (3:2:2)

This course will cover the aspects of video production used by educators and trainers to produce quality motion media. A review of research, pre-production organization, production techniques and post-production editing will be included. Students will have the opportunity to produce motion media in this course.

MCOM 536 Internet for Educators (3:3:0)

Students will be introduced to the fundamentals of using the Internet to access and share information with emphasis being given to how this technology can be used as a classroom tool. Project design, commercial services, free services, and online procedures will also be emphasized

MCOM 538 Desktop Publishing for Educators (3:3:0)

Students will learn the basics of using the microcomputer for producing print media, which can be used in the classroom. Assignments will give students hands-on experience in producing effective educational publications. Topics include: publication design, use of type, and instruction on page layout problems.

MCOM 540 Multimedia for Educators (3:3:0)

Students will learn the basics of producing multimedia on the microcomputer which can be used in the classroom. Assignments will give students hands-on experience in producing educational multimedia. Topics include: multimedia design, production of elements and combining those into an instructional design.

MCOM 545 Interactive Media (3:3:0)

This course is designed to introduce the student to the technology of interactive media. Special emphasis is placed on the various applications for interactive media. Students will gain practical experience in creating interactive media programs.

MCOM 580 Research Project I (3:3:0)

Students will perform an investigation and comprehensive search of the literature of two technology topics. Written scholarly papers will be developed and the results of one of the investigations will be presented orally. This is the first in a two course sequence required of those who do not write a thesis.

MCOM 581 Research Project II (3:0:0)

Students will further develop one of the topics investigated in the course Research Project I. The results of this course will be a product that will have pragmatic application in the area of instructional and/or training technology. This course is required of all students in the non-thesis program.

MCOM 585 Internship (3:3:0)

Students will work in an environment that provides professional experiences related to the student's field of interest and study. The students will be jointly supervised by an external non-department member media professional and appropriate department assigned instructional technology tasks, and document the activities of an instructional technology and/or training media professional.

MCOM 589 Thesis (6:0:0)

This course consists of thesis topic development, information gathering, material organization, data evaluation, formal thesis report writing, and completion of the thesis. Thesis procedures must adhere to the *Thesis Guidelines* as defined by the Office of the Graduate School and the Department of Media, Communications and Technology. Students register for six semester hours in one semester with approval of advisor.

Movement Studies and Exercise Science

MSES 506 Theory and Techniques of Coaching (3:3:0)

This course will provide a basic overview of the theories and strategies necessary to become a successful coach. The welfare of the athlete being the primary focus. Sport areas covered will be philosophy, psychology, pedagogy, physiology, medicine and management. After successful completion of this course, the student will receive an American Sport Education Program Diploma.

MSES 510 Curriculum Development in Physical Education (3:3:0)

The role of physical education in the context of the school program and the process of establishing purposes, selecting experiences, as well as program designing and evaluation are emphasized.

MSES 511 Movement Education: Elementary School Physical Education (3:3:0)

This course is a study of issues, and concepts in movement education in contemporary perspective. Proposed theoretical structures of movement education are treated with reference to emerging views of purpose and projected development within the United States.

MSES 512 Constructing Sequential Learning to Implement a Conceptual Approach to the Teaching of Physical Education (3:3:0)

This course will develop the skills of pre-service teachers and enhance the ability of Physical Educators to provide sequential learning plans to implement a conceptual approach to the teaching of physical education. Students will demonstrate their creations. In seminar fashion students will discuss, evaluate, and adjust created plans. This course will simulate the work of professionals as they design sequential learning experiences (K-12).

MSES 513 Evaluation in the Teaching-Learning Process in Health and Physical Education (3:3:0)

Course content will include basic statistical techniques for analyzing and interpreting cognitive, psychomotor, and affective variables in health and physical education. Use of these evaluative tools will be applied to the teaching-learning situation, curriculum and program evaluation, competency evaluation, diagnosis, placement, individualization of instruction and other current instructional practices.

MSES 515 The American Woman in Sport (3:3:0)

The American woman in sport, including the history of her participation, relationship to changing female roles and ideals, attitudes toward competition for women, roles of women's sport organizations, and motivations of sportswomen, is examined.

MSES 516 Advanced Kinesiology and Pathokinetics (3:3:0)

This course applies the anatomical knowledge of the human locomotor system and mechanical principles to the quantitative and qualitative analyses of normal and pathological motion.

MSES 517 Analysis of Teaching Behavior in Physical Education (3:3:0)

This course focuses on the study of teaching behavior during the teaching-learning transaction. It includes the theory, application, analysis, and evaluation of behavioral concepts and their implication for teaching. Class discussion will focus on learning theories, motivational theories, the spectrum of teaching styles, structure of subject matter, personality, idiosyncratic behavior, gesture behavior, and discipline.

MSES 518 Philosophy and Physical Education (3:3:0)

This course is a review of contemporary philosophical positions and their implications for professional decision-making in physical education. Focus on the course is upon an awareness of and a concern

for the development of the student's personal professional philosophy.

MSES 519 Sport and Society (3:3:0)

The nature, function, and relationships of sport and society with reference to the consideration of sport in social and cultural context and the social variables which affect participation are studied.

MSES 520 Seminar: Physical Education Literature (3:3:0)

Selected articles from the literature in physical education and related fields are critically reviewed. The student will study how and will write an article and submit it for publication. Professional areas considered are: adaptive, administrative, athletics, cultural, facilities, philosophy, psychology, skills, and sociology.

MSES 521 Professional Perspectives for Physical Education (3:3:0)

The course is a study of issues, trends and persons in the profession of Physical Education in historical and contemporary perspective; the structure of the profession and its related fields are treated with reference to emerging views of purpose, responsibility, and projected development in the United States.

MSES 522 Advanced Theory and Techniques of Physical Education (3:3:0)

This course provides the practicing teacher-coach an opportunity to study advanced theories and techniques relative to the activities commonly included in the public school physical education program.

MSES 523 Administration: Physical Education and Sport Programs (3:3:0)

This course employs a theoretical approach to the development of administrative thought as it relates to physical education and sport programs; emphasis is on the understanding of concepts and models from the social sciences, and their implications for leadership in the educational setting; the development of a personal philosophy of administration.

MSES 525 Psychology of Human Performance (3:3:0)

This course treats the research and theoretical consideration of the psychological variables in human performance, with special reference to the bodyself in movement, and the psychology of sport.

MSES 526 Biomechanics of Human Performance(3:3:0)

This course focuses on the study of basic physical laws relative to human motor performance. Factors such as equilibrium, linear motion, angular motion, ballistic movement, and fluid mechanics are considered as they affect internal body mechanics of the human and his/her interaction with environmental objects. Prerequisite: Kinesiology.

MSES 528 Physiology of Human Performance (3:3:0)

Emphasis is given to study of metabolism and cardiovascular and respiratory human physiology. Prerequisite: Physiology of Exercise.

MSES 529 Motor Learning (3:3:0)

Learning and motor performance are studied with emphasis on the development of motor skill and related theories of learning and behavior. It includes analysis of the learning process in relation to motor development and the role of the teacher.

MSES 530 Electrocardiography, Non-Invasive Cardiac Evaluations, and Implications in Exercise and Rehabilitation (3:3:0)

Basic electrocardiographic concepts of the normal EKG, arrhythmias, conduction defects, ischemia infarction, hypertrophies, exercise, drug effects, and rehabilitation are discussed and demonstrated. Noninvasive procedures of echocardiography and thallium scanning and their importance in diagnosis and rehabilitation are presented. CRES students only/permission of instructor.

MSES 531 Cardiac Rehabilitation Clinical Laboratory I (3:0:9)

This lecture/lab experience is conducted in the Human Performance Lab and prepares students to participate in a variety of multidisciplinary clinical environments. Development of pertinent skills and discussion of relevant concepts pertaining to cardiac rehabilitation and exercise for other special populations are presented to prepare students for experiences at area hospitals and medical facilities. CRES students only.

MSES 532 Cardiac Rehabilitation Clinical Laboratory II (3:0:9)

This lecture/lab conducted in the Human Performance Lab continues the discussion and development of skills necessary to continue preparation of CRES students for clinical rotations of area hospitals

and medical facilities. CRES students only.

MSES 533 Health and Fitness Clinical Laboratory III (3:0:9)

Students observe and experience the programmatic, organizational, and administrative aspects of the Health and Fitness program at Pocono Medical Center. The “wellness” concept is stressed by learning evaluation and measurement techniques as well as participation in educational and counseling settings.

MSES 534 Sports Medicine (3:3:0)

This course is a survey of topics included under the broad umbrella of Sports Medicine, representing both scientific and clinical branches of the field. Emphasis is placed on factors which can enhance performance, promote, and protect the welfare of participants in exercise, dance, recreational and competitive sport.

MSES 535 Differential Assessment of Musculoskeletal Injuries (3:3:0)

This course is designed to differentiate between movement disorders and the diseases or pathologies diagnosed by a physician. Since some impairments are consequences of disease, the athletic trainer should be able to identify and recognize conditions which need to be referred to a physician.

MSES 536 Organization and Administration of Cardiac Rehabilitation and Primary Prevention Programs (3:3:0)

This course analyzes general principles and procedures of cardiac and primary prevention programs. The organization and administration of specific cardiac programs will be discussed. CRES students only.

MSES 537 Stress Testing and Sports Prescription (3:3:0)

An in-depth analysis of exercise stress testing for cardiacs, symptomatics, and asymptomatics is presented along with principles and practices of exercise prescription. Traditional as well as more recently developed stress testing procedures are discussed. CRES students only/permission of instructor.

MSES 538 Cardiac Pathology and Pharmacology (3:3:0)

Lectures and discussion emphasize major cardiac diseases and their affect on cardiovascular function. The role of exercise in the rehabilitation from these cardiac disorders is analyzed and evaluated. Traditional and newer drugs and their pharmacological actions are presented as they relate to rehabilitation and treatment. CRES students only/permission of instructor.

MSES 539 Coronary Heart Disease: Its Medical Diagnosis and Management (3:3:0)

This course presents a broad overview of coronary heart disease etiology, diagnosis, treatment and prognosis related to cardiac rehabilitation. Students will be introduced to material that will serve as a foundation for advanced courses in pathophysiology, electrocardiography, stress testing and clinical laboratories. CRES students only/permission of instructor.

MSES 541 American College of Sports Medicine Workshop (2:1:2)

The Exercise Specialist Workshop will provide structured experiences in the classroom, laboratory, and gymnasium to improve knowledge and understanding of graded exercise testing, exercise prescription, and physical activities as used in prevention and rehabilitative programs as outlined in the American College of Sports Medicine Guidelines.

MSES 544 Seminar: Current Athletic Injury Prevention and Management (3:3:0)

Techniques of prevention, examination, and rehabilitation of athletic injuries and current topics in sports medicine are all considered. This course also examines total care of the athlete, ethics, morals, and legal liability in sports. Prerequisite: Basic course in the prevention and care of athletic injuries or permission of the instructor.

MSES 546 Planning and Management of Sports Facilities (3:3:0)

The course is designed to provide the student with knowledge of the planning and management of facilities for school physical education, athletic, and intramural/recreational programs. Buildings, grounds, and equipment, as well as maintenance of these facilities will be discussed. Students will visit and tour a facility.

MSES 547 Sports Business and Finance (3:3:0)

This course is to provide the student with knowledge of the business and financial considerations of various sport enterprises.

MSES 548 Sports Marketing (3:3:0)

The course is designed to provide the student with knowledge of sport marketing as it relates to spectator and participant. It will also give the student knowledge and understanding of the marketing considerations of various sport organizations. Fund raising applications will also be discussed.

MSES 549 Sports and the Law (3:3:0)

The focus of this course will be on legal concepts and principles related to the administration, coaching and teaching of sports. Legal issues involving personnel, facilities, equipment, transportation, medical aspects, liability and gender will be examined. Legal terminology and the court systems will be included.

MSES 550 Sport Personnel Management (3:3:0)

This course focuses on various leadership styles, managerial communication and interaction skills and their relative effectiveness in sport organizations. Attention is directed to specific personnel tasks such as hiring, development and evaluation of sport staff, and personnel issues of current importance.

MSES 551 Application of Computers to Sports Management (3:3:0)

This course is designed to provide students with computer knowledge and skills applicable to sports management. The advantages and application of computers in sports programs will be emphasized. Opportunities for understanding and running existing computer programs will be provided. This course also offered through Summer Home Study.

MSES 553 Ethical Issues in Sports Management (3:3:0)

This course will focus on the identification of ethical issues in sport situations, analyzing the actions and decisions as to value orientations and ethical stance, and identifying and formulating a consistent ethical base for one's own functioning as a sport administrator.

MSES 555 Exercise and Weight Control Workshop (2:1.5:1)

This workshop will focus on the role of exercise in regard to its positive influences on weight control. Hazards and implications of being overweight will be studied. Techniques for evaluating energy balance and planning for weight loss programs are discussed in light of established scientific principles and procedures. Exercise along with its dietary counterpart are analyzed to determine their relative importance in the weight loss regime. Facts and fallacies are discussed, and opportunities for self evaluation of leanness and fatness provides practical as well as theoretical experience.

MSES 556 Aerobic Fitness Workshop (2:1.5:1)

This workshop provides a theoretical and practical framework for measurement and evaluation of aerobic fitness in children and adults of both sexes. Field tests that can be administered by teachers and paraprofessionals are practiced, analyzed, discussed, and validated by laboratory demonstration and participation. Concepts and application of aerobic fitness principles are viewed in light of present day and future needs. Opportunities for self-evaluation of aerobic fitness will provide technical and administrative insights.

MSES 557 Reducing Coronary Heart Disease Workshop (2:1.5:1)

This workshop is to study exercise as a means of evaluation, prescription, and diagnosis for the major threat to health in the United States today - heart disease. Recent studies with their findings and implications will be reviewed. The scientific basis for recommended exercise and associated behavior will provide information with regard to children and adults of both sexes on reducing heart disease risk. Rehabilitative exercise programs for heart victims will focus on accepted training principles and necessity for changing life styles. Prevention rather than treatment for heart disease will be stressed.

MSES 559 Public Relations in Sport Management (3:3:0)

This course will focus on public relations concerns specific to athletic administrators, managers of sports facilities, and coaches. Content includes establishing a framework for public relations processes, communicative tools and techniques, and relationships with the media.

MSES 560 Physical Activity and Aging (3:3:0)

In this course, students will examine the scientific evidence relating the role of physical activity, exercise and fitness to the aging process, longevity, and the quality of life. Application of assessment and training techniques, attitude assessment, and motivation will be included. Students should have some prior background in either gerontology or physical education. Prerequisite: Prior background in either Physical Education or Gerontology.

MSES 561 Seminar: Adapted Physical Education (3:3:0)

The anatomic and physiologic bases for identifying and programming the handicapped child are studied. Both modified and remedial procedures are considered. Selected handicapped individuals serve as subjects for the practical aspects of the course.

MSES 562 Seminar: Therapeutic Agents in Athletic Training (4:4:0)

This course is designed to present the student the application of scientific theories, as they apply to the rehabilitative strategies and the treatment protocols associated with the use of various physical agents (light, heat, sound, electricity, etc.) in the treatment of sports and activity-related injuries.

MSES 563 Seminar: Therapeutic Exercise in Athletic Training (4:4:0)

This course is designed to present the student with the scientific theories, the treatment strategies and application protocols associated with the use of various forms of therapeutic exercise in the rehabilitation of sport-related and activity-related injuries.

MSES 565 Supervision in Health and Physical Education (3:3:0)

History, philosophy, and general principles are considered as basic to the development of different patterns or organizations for effective supervision. It includes a survey of the problems, confronted in supervision and a critical analysis of the full scope of methods available for solving such problems. Emphasis is placed upon the various aspects of human relations in supervisory function. Evaluation techniques, characteristics, and areas are reviewed and analyzed.

MSES 570 Introduction to Research (3:3:0)

This course provides an orientation to graduate study and research in Health Education and Movement Studies and Exercise Science. This seminar is designed to acquaint the graduate student with the methods and materials of graduate study and scientific inquiry. It is required of all graduate students in the degree program.

MSES 571 Independent Research Problem (Semester hours arranged.)

This course utilizes selected research techniques to attack a specific professional or academic problem. It includes preparation and presentation of a formal report. Consult Adviser well in advance of registration. This course is required for all students in the research or project program, and it may be repeated with permission. Prerequisite: MSES 570, 574.

MSES 572 Thesis Seminar (1-3 Semester hours arranged.)

This course utilizes selected research techniques to address a specific professional or academic problem. It includes preparation and presentation of a formal report. Students must consult adviser well in advance of registration. This course is required for all students in the research or project program, and it may be repeated with permission. Prerequisite: MSES 570, 574.

MSES 574 Research Laboratory (1:0:3)

The preparation of the research proposal including the development of the purpose and design of the proposed research problem or thesis is the focus. This course must be repeated until "satisfactory" grade is earned. Prerequisite: Completion of MSES 570 or current enrollment.

MSES 577 Independent Study in Health or Physical Education (Semester hours arranged.)

Under the auspices of a qualified member of the Faculty the student pursues a pattern of readings, study, and research related to professional knowledge and understanding in health or physical education. Topics should be established prior to enrollment. Prerequisite: Permission of the faculty member and the department.

MSES 581 Analysis of Gymnastics I Workshop (3:3:0)

A critical analysis of biomechanical principles as they apply to both gross and fine gymnastic movement patterns. Additional emphasis will center about a presentation of analytic techniques specific to maximum realization of motor performance. Further research will be directed toward practical application of all research relevant to the gymnastic discipline. Both lecture-demonstration and seminar methods of instruction will be employed.

MSES 582 Analysis of Gymnastics II Workshop (3:3:0)

A quantitative analysis of biomechanical principles as applied to both gross and fine gymnastic movement patterns. Additional emphasis centers about a critical review of the research relevant to the gymnastic discipline. Lecture-demonstration and similar methods of instruction are employed.

MSES 584 Anaerobic Training Workshop (2:1.5:1)

This workshop provides a theoretical and practical framework for measurement and evaluation of anaerobic conditioning, flexibility, plyometrics and strength training. Field and laboratory tests that can be administered by athletic coaches, teachers and fitness professionals are practiced, analyzed and discussed.

MSES 585 Seminar in Strength and Conditioning (3:3:0)

The relationship of exercise, rest, fatigue, nutrition, and heredity to physical performance is studied. Current methods of physical conditioning will be discussed. Programs for fitness and athletic conditioning are developed and discussed.

MSES 586 Field Experience and Internship (Semester hours arranged.)

This course is designed to provide the student with practical experience with a federal, state or private organization in some related aspect of physical education and/or sports medicine. Students will coordinate their course work acquired at East Stroudsburg University with specific field experience. This program will be supervised by a member of the MSES Department. Prerequisite: Permission of the Department.

MSES 595 Cardiac Rehabilitation Seminar (3:3:0)

This course focuses on current concepts, controversies, and issues in cardiac rehabilitation. The lecture-discussion format utilizes appropriate literature as sources for dialogue, and prerequisite courses serve as a basis for analyzing relevant theoretical and practical concerns. CRES students only.

Music

MUS 501 Choral Music Symposium (1:1:0)

This course will be a comprehensive choral training symposium for church choral directors and school choir directors. Clinicians, including composers, will direct sessions in choral rehearsal techniques and performance practices and conduct studies on curriculum materials.

MUS 502 Instrumental Music Masterclass (1:1:0)

This course is a masterclass taught by a renowned professional instrumental performer. Topics stressed will include instrumental techniques, phrasing, expressive nuances, and practice/performance strategies. Student performance will be evaluated and constructive suggestions will be provided. Prerequisite: Permission of instructor.

MUS 503 Jazz Keyboard Chords (2:1:2)

Students will learn to perform standard jazz chords with extensions in major and minor keys on a keyboard. Standard chord voicings for two hands and left hand only will assist auditory training, knowledge of music theory, and some jazz improvisation. Students will accompany pre-existing melodies with jazz chords.

MUS 504 Jazz Masters Seminar (1-3:3:0)

Students will study the lives, music, and careers of several accomplished, active jazz professionals. Each artist will then be a guest speaker, interacting with the class. Writing assignments will make this the culminating academic jazz experience.

MUS 511 Fine Arts and Ideas (3:3:0)

Members of the Art, Music, and Theatre Faculties offer this integrated study of humanistic values in the visual and performing arts. Students will have the opportunity to focus on specialized areas of interest through discussion and research. This course is also offered as ART 511 and THTR 511.

MUS 577 Independent Study (Semester hours arranged.)

Under the direction of a member of the department faculty, the student will pursue an advanced program of study in an area of special interest in music.

Nursing

NURS 520 Analysis of Aging (3:3:0)

This course is designed to analyze the aging process with a multi-disciplinary approach. Physiological, psychological, sociological factors which influence the individual's response to aging

are studied. This course is geared for students preparing for health disciplines. Enrollment is not limited to nursing majors

Political Science

POLS 520 Area Studies I (3:3:0)

(A specific area will be announced). This course investigates selected problems of historical and political development in major world areas. Emphasis is placed on political institutions-their background, development and significance.

POLS 522 Seminar: Foreign Travel and Study (3:0:6) or (6:0:12)

This course is a study at foreign colleges and universities in the history and government of the countries visited; their economic growth and integration. Emphasis is placed on formal and informal discussion and analysis of contemporary indigenous problems.

POLS 525 Seminar: The Middle East (3:3:0)

This course will offer an advanced study and analysis of selected Middle East states. Emphasis will focus on political culture, modernization efforts and nationalism both in terms of regional identity and in terms of its broader international consequences.

POLS 528 Comparative Policy Analysis (3:3:0)

This seminar concentrates on the theory, techniques, and content of a body of research broadly concerned with factors that determine the variation in patterns of public policy across jurisdictions and over time. Students read materials that focus on how cultures, economic systems, and political institutions differ and how these differences affect public policies.

POLS 531 Contemporary Political Thought (3:3:0)

This course is a study of Twentieth Century thought concerning the role of the state in society. It includes discussion of ethical as well as pragmatic consideration analysis and appraisal of individualism, fascism, socialism, communism, syndicalism, and other doctrines. Political structures and functions are considered in connection with social values and objectives.

POLS 532 Seminar in Parties and Politics (3:3:0)

This course analyzes political parties as a part of the political process; political parties as an integral force in society; the transformation of societal values into public policy through the operation of the party system; electoral systems and their relationship to the nature of political system; voting behavior; changing style in party strategy; campaigning; and suggestions for electoral reform.

POLS 533 The Presidency (3:3:0)

This course is an analysis of the presidency; its nature in both its personal and institutional dimensions; the growth of the office; the politics and problems of seeking the office of the presidency; the President's roles as chief executive, party leader, legislative leader, and leader in the international political system. Since this course is also offered for undergraduate credit, differentiation of course requirements may be made.

POLS 534 Seminar: Presidential Elections and Politics (3:3:0)

This course is a study of the presidential elections of unusual significance in U.S. history; pre-election politics, partisan maneuvers, the platform and selection of candidates; examination of the campaign and election process; discernment of distinguishing characteristics as well as common patterns; evaluation and comparison of results and future applicability.

POLS 535 American Federalism (3:3:0)

This course examines the distribution of powers between Federal government and states; historic development; current trends; major areas of conflict and cooperation; case studies of significant problems. Emphasis is on administrative process and evaluation.

POLS 536 Seminar: Readings in Civil Liberties (3:3:0)

Attention is given to changed conditions and new influences affecting American liberty in the twentieth century. It includes an analysis of issues in economic, social, and political liberties. Emphasis is on constitutional logic and change and on evaluation of the role of the state and the responsibility of the citizen in defining civil liberties. Selections of issues are adapted to student interest and timeliness of problems.

POLS 537 Problems in Public Administration (3:3:0)

This course is a survey and analysis of the major contributions in traditional and contemporary organization theory; examination of decision making, leadership, and human behavior in complex organization; the study of Public Administration as an integral part of the public policy process; problems in budgetary politics; and personnel administration, administrative law, and democracy in the administrative state.

POLS 538 United States Foreign Policy (3:3:0)

This course examines the Constitutional basis of U.S. foreign affairs; foreign policy; separation of powers; the mechanics of foreign relations; significant principles; tenets and trends as revealed in United States diplomatic history; treaties and executive agreements; traditional and new diplomatic practices; foreign policy and international organization; and the extent of democratic control of foreign affairs.

POLS 540 Comparative Politics (3:3:0)

This course consists of a comparative analysis of Western European political systems with special emphasis upon the environmental factors that have shaped these systems and the identification of relevant categories, such as ideology and the organization of political authority, from which generalizations may be derived.

POLS 541 Seminar on War and Peace (3:3:0)

This course investigates case studies of tension areas in world affairs, such as unresolved conflict, crucial areas of friction and crucial border situations, the causes of wars and diplomatic efforts for solutions. It includes an evaluation of conflicts and prospects for the preservation of peace.

POLS 542 United States Diplomacy and International Organization (3:3:0)

This course investigates the role that the United States played in the establishment and maintenance of international organizations and the popular pressures toward their formation; the roles of the executive and legislative in their interaction; the vacillating U.S. attitude toward the League of Nations; U.S. world leadership in the United Nations; contemporary role of the United States in the United Nations.

POLS 543 The United Nations (3:3:0)

This course investigates the establishment, operation and responsibilities of the United Nations, its organs, agencies, and commissions; the development of the Charter since its inception and analysis of its emerging structure; the problems of increasing membership; the strengths and weaknesses of the Charter, the evaluation of U.N. successes and failures; and the prospects for the future.

POLS 544 Theory of International Relations (3:3:0)

The nature of the state system will be examined; including the nature of the state, nationalism, national power, sovereignty; national interests; the nature of controls which restrain states and produce a tolerable international order; evaluation of major foreign policy and international organization; extent of democratic control. Prerequisite: One course in international affairs or permission of instructor.

POLS 545 International Law and Organization (3:3:0)

This course is a study of rules that govern sovereign states in their legal relations with each other; historic development and current status of the law of nations. Key cases are studied to illustrate rules. It includes a survey of the development of international institutions from the 19th century public unions to the more recent specialized agencies; procedures for settlement of disputes; development of law in and outside the community of nations; and the study of international organizations as a political phenomenon of the 20th century.

POLS 547 Seminar in American Political Thought (3:3:0)

An in-depth exposure to major segments of American political thought, with a special emphasis on the emergence of Liberalism. This evolution would be considered in successive courses, as determined by the professor. A possible breakdown might be as follows; relevant English, revolutionary, Constitutional and Whig thought; transcendentalism, the Civil War and individualism, pragmatism, revisionism and conservatism, New Deal Liberals and other recent writings.

POLS 548 The Politics of Developing Nations (3:3:0)

This course is a comparative analysis of political development in the Third World with particular focus upon the role of revolutionary warfare and politics, charismatic leaders, military elites and ideology.

POLS 549 Black Nationalism (3:3:0)

A course designed to deal with Black experience in America, Africa, and other parts of the world, will examine the social, economic, and political and cultural implication of Black consciousness and militancy. It will stress the benefits that can be expected from Black nationalism for the Black and White races and for the entire world.

POLS 550 Seminar in International Studies (3:3:0)

This course consists of studies of international dimensions of human experience. It includes an investigation of various aspects of human interactions with emphasis on political, economic, philosophical, educational, and other areas. The approach is interdisciplinary and includes projects and practical experiences. Students may receive credit in political science or in other fields in which they complete projects with permission of cooperating departments.

POLS 554 The Legislative Process (3:3:0)

This course concentrates on the United States congress; its role in the evolution of the American political process, the internal workings of the Congress, the environment in which congress functions, and an assessment of Congressional effectiveness.

POLS 562 Political Behavior (3:3:0)

This course is an examination of the formation and causes of cleavages and consensus in the political system; the study of political attitude formation, leadership performance, small group relationships; and the effects of political myth, ideology, communication and political power on these processes.

POLS 565 Revolutionary Governments (3:3:0)

The proposed course in Revolutionary Governments will examine the forces contributing to revolutionary overthrow of traditional governments and their replacement by radical reformism. Various contemporary case studies together with the more important theoretical literature on the nature of revolutionary movements will be analyzed.

POLS 566 Public Budgeting and Finance (3:3:0)

This course treats budget as a policy instrument that sets priorities for government. Students study the politics of the budget process as well as its procedures. Attention is also given to fiscal and monetary policies and to using computer simulations in budgeting. This course provides graduates with an overview of the budgeting process from revenue sources to expenditure controls. Special emphasis is placed on systematic budgeting techniques such as ZBB and MBO. It requires each student to become acquainted with accounting techniques used in public agencies.

POLS 570 Introduction to Research: Scope and Method (3:3:0)

This course is an orientation to graduate study and research. This seminar is designed to acquaint the graduate student with the methods and materials of graduate study and scientific inquiry in Political Science. The course is required of all graduate students in the degree programs.

POLS 571 Independent Research Problem (Semester hours arranged.)

This course utilizes selected social science research techniques to attack a specific problem. A formal report is prepared and presented. The course is required for all students in the non-thesis program. Requires prior or concurrent completion of POLS 570.

POLS 572 Thesis I (3:0:0)

This course consists of the development of a thesis topic; gathering of information; organization of material; evaluation of data; and writing of a formal thesis report.

POLS 573 Thesis II (Semester hours arranged.)

See POLS 572 Completion of Thesis. The emphasis is on originality, depth of research, and contribution to knowledge.

POLS 577 Independent Study in Political Science (Semester hours arranged.)

Under the auspices of a qualified member of the departmental faculty, the student pursues a pattern of reading, study, and research related to professional knowledge and understanding in political science. Topics should be established prior to enrollment. Prerequisite: Departmental approval; permission of the chairperson of the department.

POLS 580 Interdependence of Nations (3:3:0)

This course is a study of the political behavior and policies of selected nations, regions and international organizations. Stress is on the need for cooperation within the framework of global

inter-dependence. Guest lectures and native foreign speakers are scheduled. Varying formats including model arrangements are employed.

POLS 586 Field Experience and Internship (Semester hours arranged.)

This course is designed to provide the student with practical experience in a governmental agency or other organization with local, state, or national governmental or political concerns. Prerequisite: A minimum of 6 s.h. completed on the graduate level in political science with at least a “B” average. Enrollment in department graduate program.

Reading

REED 521 Language and the Reading Process (3:3:0)

This course is designed to examine the nature of language, acquisition of language, dialects, and the influence these factors have on reading ability. Recent applications of linguistic theory to reading instruction are also covered. Competency prerequisites.

REED 522 Theoretical Models of Reading & Literacy Processes (3:3:0)

In this course, students consider the historical perspective, the current theories, and the future directions of reading instruction. Participants examine diverse approaches to reading, engage in productive discussion, and explore the knowledge base from which reading educators work.

REED 523 Analysis of Instructional Techniques in Reading (3:3:0)

This course is a survey of the reading process, a study of the methods suitable for attaining desired goals in reading, and an evaluation of teaching materials.

REED 524 Reading Clinic Practicum (6:0:12)

This course consists of a guided and supervised practical application of principles and theories of teaching reading. Competency prerequisites.

REED 525 Research Seminar in Reading (3:3:0)

This course provides an understanding of the best methods to use in interpreting and using research reports. It includes a study and evaluation of available research in the field of reading. Competency prerequisites.

REED 526 Development of The School Reading Program (3:3:0)

This course defines the various Reading specializations, the duties and responsibilities of the Reading specialists and provides students an opportunity to develop and administer reading programs suitable for specific school situations. Competency prerequisites.

REED 527 Reading in the Content Areas (3:3:0)

Emphasis in this course is placed on the evaluation of reading material in the content areas for the purpose of determining the principal comprehension skills and thought processes necessary for understanding. Also ways in which content area teachers can assist students to effectively use these skills and processes are emphasized.

REED 529 Assessment and Evaluation of Literacy (3:3:0)

This course is designed to give practice in the use of formal and informal assessments in appraising a child’s skill in reading and related areas. The utilization of a literacy profile, which serves as the basis for instructional practices, is emphasized. Competency prerequisites.

REED 530 Teaching Reading Through Young Adult Literature (3:3:0)

Participants in the course will examine how to engage young adults in the reading process through literature-based instruction. Among the topics to be addressed will be teaching reading through thematic units, the shared stages of reading and writing, literature-response methods and developing reading strategies through a variety of literary genres.

REED 546 Learning to Read Through the Arts (3:3:0)

This course prepares teachers to develop and use an individualized reading program designed to improve reading skills through the integration of a total arts program with a total reading program.

Professional and Secondary Education

PSED 502 Comparative Education (3:3:0)

This course deals with current educational systems throughout the world and an analysis of the forces which have influenced these systems.

PSED 503 Comparative Education Abroad (3:Arr:0)

This overseas fieldwork permits one to gain experience in his/her professional area overseas. One is assigned to a counterpart teacher/administrator abroad for three weeks. During this time one may engage in independent teaching, team teaching, small-group work, individualized instruction and assistance with activities in the host school. Time should be available to discuss with staff in the overseas school such things as program, teaching methods and materials, organization of schools, and problems of education and curriculum.

PSED 504 Philosophy of Education (3:3:0)

This course is concerned with the philosophical consideration of the rights and duties of the child, the parent, the school, and the society. It examines the purpose of education in a democratic society from the varying views of modern schools of philosophy. Problems related to the organization, administration, and methods of teaching are explored in their philosophical context.

PSED 505 Classroom Management and Discipline Models (3:3:0)

The course will emphasize classroom management from the viewpoint of effective teaching. Specific discipline models will be analyzed and evaluated. Students will assess their philosophies in regard to classroom management practices and discipline models.

PSED 509 History of Education (3:3:0)

The course will examine, evaluate, and analyze American educational history from colonial times to the present day with recognition of pioneer efforts and people who have played an important part in the development of the American education process.

PSED 510 The Teacher and the School Community (3:3:0)

This course analyzes a wide spectrum of human relations within the broad area of basic education. Common professional problems are discussed. It also includes an examination of the values and beliefs of the community as related to the public school.

PSED 511 Educational Sociology (3:3:0)

This course is a study of the public school in its strategic position in society and the social changes that directly affect the educational system and process. Community social service organizations that complement the role of the schools are explored and examined.

PSED 512 Teaching of Writing in the Secondary Schools (3:3:0)

This course will briefly survey the history of the teaching of writing in American secondary schools, intensively review writing process theory and research of the past two decades and critically consider the implications of writing process theory and research for classroom practice.

PSED 514 Educational Statistics (3:3:0)

This course includes an introduction to the statistical method including descriptive statistics and an introduction to statistical inference; frequency distributions in one and two variables; measures of central tendency and variability; dispersion; regression and correlation; the binominal and normal distribution; randomness; estimation of parameters; standard errors; testing hypotheses about means and differences between means, type I and type II errors; "T"; chi-square, "F" distributions; and analysis of variance.

PSED 515 Educational Evaluation (3:3:0)

This course deals with the interpretation and selection of standardized tests in achievement and other facets of evaluation. The efficient construction of classroom tests and current trends in educational evaluation are included in the course.

PSED 516 The Learner and the Learning Process (3:3:0)

A review of various views (humanistic, behavioral, cognitive) of the learner and learning theorists (Skinner, Rogers, Bruner, Piaget). Case studies of actual teaching learning problems are brought to the class by the participants for examination and discussion by the group.

PSED 520 Seminar in Secondary Education I (3:2:2)

This seminar includes the study and application of lesson planning, teaching strategies and style and questioning skills. Seminar includes a required field experience (amounting to 30 hours) in the course. Students taking this course must sign up one semester in advance. Permission of instructor required for enrollment. Prerequisites: Foundations of Education, Educational Psychology, and permission of instructor.

PSED 521 Seminar in Secondary Education II (2:2:0)

This course includes the study and application of strategies of student assessment, technology, communication techniques, classroom management theories, and the elements of an inclusive classroom. Seminar II includes a required field experience in a multicultural setting of 30 hours. Students taking this course must sign up one semester in advance. Prerequisite: Seminar in Secondary Education I and permission of the instructor.

PSED 525 Classroom Behavior of the Secondary School Student (3:3:0)

A course designed for the person interested in furthering understanding of the secondary school student. Emphasis will be placed on the physical, social, emotional, and mental growth characteristics of students in grades 7-12.

PSED 535 Classroom Diversity: Creating a Positive Environment (3:3:0)

This course encourages educators to identify their own values, prejudices, and goals; to examine their thoughts and/or misconceptions about culturally diverse communities. Designed to help them create school climates that celebrate diversity and meet the needs of students of different races, ethnicities, gender, and ability levels. (Can also be a standard graduate configuration.)

PSED 553 Teaching and Motivating (3:3:0) Also a workshop—see page 107.**PSED 554 Foundations of Curriculum Construction (3:3:0)**

This course is designed for teachers, chairpersons, or supervisors who are interested in shaping curriculum development (K-12) and responsible for its evaluation. The theory for planning change in curriculum and evaluating the effects of curriculum will be viewed with concern being given to gathering evidence of need for change, research in change, models for initiating change, and models/theories for evaluating present and changing curriculum. Prerequisite: Graduate Standing. Not for General Education.

PSED 555 Practicum in Curriculum Development (3:3:0)

This is a course designed to permit individuals or groups (K-12) to work on specific problems in curriculum development and/or implementation, including curriculum planning, selection and construction, implementation of new courses, curriculum and programs, development of proposals for change and in-service projects. Teams from schools are encouraged to enroll. (Class hours arranged).

PSED 556 Cooperative Learning (3:3:0) Also a workshop—see page 107.**PSED 560 Seminar in Research in Curriculum and Instruction (3:3:0)**

This is a graduate seminar in current research developments in the field of curriculum and instruction. The techniques and literature of research will be employed to analyze the stability and direction of developmental trends in curriculum and instruction.

PSED 565 Curriculum Development in the Middle School (3-6:3:0)

Designed to meet the needs of teachers who are developing programs and materials for the middle school, emphasis is placed upon the process of curriculum planning; objectives of education, diagnosis of curriculum development, selection of curriculum experiences, organization and evaluation of curriculum content.

PSED 570 Field Assessment of Mastery in Education (3:3:0)

This course is a performance-based assessment of proficiency in education in which observations are made of specified professional skills in actual classroom situations. It includes interaction analysis, videotaping, and conferences. Prerequisite: Completion of 15 graduate credits. (Class hours arranged.)

PSED 571 Independent Research Problem (semester hours arranged)

This course is designed to assist students in the selection of an important problem in secondary education. Using recent methods in research techniques, the student will complete a faculty approved research project. Prerequisite: ELED 570.

PSED 574 Professional Experiences in Educational Administration I (3:1:4)

This experience is designed to provide the student with practical experience in supervision and/or administration in a school setting. It is a field experience under the supervision of an ESU faculty member in cooperation with an area school administrator. Prerequisites: PSED 585, 588, 590, 591 or 594, and 596. Permission of the Department.

PSED 575 Professional Experiences in Educational Administration II (3:1:4)

This experience is designed to provide the student with practical experience in supervision and/or administration in a school setting. It is a field experience under the supervision of an ESU faculty member in cooperation with an area school administrator. Prerequisite: Professional Experiences in Educational Administration I.

PSED 576 Teaching Strategies for Secondary Teachers (3:2:2)

Endeavors to redesign instruction in order to make maximum learning more accessible to every pupil. Methods for developing a personal instructional system which fits the subject and the pupils will be outlined.

PSED 577 Independent Study (semester hours arranged)

Under the auspices of a qualified member of the faculty of the graduate school, the student pursues a pattern of readings, study and research related to professional knowledge and understanding in Professional or Secondary Education. Topics should be established prior to enrollment. Prerequisite: Approval of the Department Chairperson.

PSED 579 Current Trends In Secondary Education (3:3:0)

This course serves as a basic and comprehensive source on current trends and innovative practices in the secondary schools. New opportunities and responsibilities for students, modifications of the traditional organization, alternative high schools, and places for learning beyond the school house are but a few areas that are discussed.

PSED 580 Professional Assessment in Secondary Education (3:3:0)

Professional Assessment is designed to cause and to facilitate self-assessment coupled with assessment from the field (where the educator is employed) and assessment by the university. The student will become thoroughly involved in the procedure of self-assessment and will in fact be introduced to degree program competencies (master teacher competencies). The self and external professional assessment will lead to individualized professional development, competency mastery, and to degree obtainment. Prerequisite: Undergraduate degree; admission to graduate school. (Class hours arranged).

PSED 584 Secondary School Curriculum (3:3:0)

This course deals with the overriding educational philosophy which governs curriculum formation. The decision-making process in curriculum improvement will be evaluated; processes for curriculum improvement will be reviewed and/or developed; and evaluative techniques will be identified.

PSED 585 Educational Administration (3:3:0)

An introduction and overview of the public school system and its management. The course provides for the orientation of prospective and current educational administrators for their roles of leadership. the course also requires field experiences in administration. Prerequisite: Graduate standing.

PSED 587 School Public Relations (3:3:0)

This course presents public relations as a comprehensive concept of interpretation for the public schools. Tenets, means, agents and agencies to produce increased social understanding and appreciation of the educational function among school personnel and the general public are discussed.

PSED 588 School Law (3:3:0)

This course is an analysis of the legal rights, responsibilities, and liabilities of student, parent, teacher, administrator, and school board. Consideration is given to the statutes, school code, and court decisions which affect education and all persons related to the education process.

PSED 589 The Supervision of Student Teachers (3:3:0)

Attention is focused on an analysis of the various functions of the cooperating teacher while working with elementary or secondary student teachers. Emphasis is placed upon new techniques for working with student teachers, systems for recording, analyzing and reporting classroom teaching

behavior, understanding the needs of student teachers, and individualizing student teaching experiences. Prerequisite: Bachelor's degree and a teaching certificate.

PSED 590 Supervision of Instruction (3:3:0)

This course is an introduction to the theory and function of supervision in the modern public school system, K-12. Application of emerging concepts and principles of modern school supervision to practical situations in which administrators, supervisors, coordinators, and teachers are working are presented.

PSED 591 Elementary School Administration (3:3:0)

Elementary School Administration will provide an overview of the elementary school principalship. A study of the tasks of the elementary school principal, major problems in performing responsibilities, and the processes used in discharging obligations are discussed.

PSED 592 The Middle School (3:3:0)

This course deals with administrative problems and practices related to the organization, operation, and program of the middle school and the junior highschool.

PSED 593 Teaching Techniques in the Middle School (3:2:2)

This course is designed to meet the needs of faculties, which are making a transition to the middle school program. Emphasis is placed upon developing programs and materials for a middle school. Topics include open-concept teaching; individualizing and personalizing instruction; team approaches; a review of IPI, PLAN, CPL and CAI models; preparing learning centers and developing learning activity packets and evaluating student progress.

PSED 594 Secondary School Administration (3:3:0)

An overview of the secondary school principalship. The course deals with the philosophical, social, and educational context in which the secondary school operates. The role of the principal, major tasks, responsibilities, changing trends and opportunities are examined. Prerequisite: PSED 585 recommended.

PSED 596 School Finance (3:3:0)

This is an introduction to the principles and structure of financing public education. The theory and practice of educational finance are examined from the point of view of problems of the local budget, the state's responsibility, taxation, and the effect of financial support upon the quality of the educational program. New concepts and emerging trends of public school finance are studied.

PSED 597 School Plant (3:3:0)

This course involves a study of problems involved in the planning construction, operation and maintenance of the school plant.

PSED 598 Trends in Secondary Math Education (3:3:0)

This course will examine current and proposed secondary mathematics curricula and models of teaching and learning mathematics. Major foci will be mathematical problem-solving and integrating technology into the mathematics curriculum.

PSED 599 Teaching Mathematics Using Technology (3:3:0)

Designed for in-service secondary mathematics teachers. Participants will learn how to use graphing calculators and computer algebra and geometry systems, how to incorporate them into their classrooms and how the mathematics that they teach will change as a result of the availability of technology.

Workshop Courses

Participants will be introduced to a hybrid teaching style designed to elevate teaching to maximize learning in the classroom.

PSED 530 Basic Workshop in Emotional Intelligence: Implications for the Classroom Teacher (3:3:0)

This course provides general human relations training as related to enabling teachers to enhance the social and emotional development of elementary and secondary students. The course will provide teachers with the knowledge, skills, and strategies for developing their students' emotional intelligence competencies, e.g., impulse control, persistence, zeal, self-motivation, and social

deftness.

PSED 531 Advanced Workshop in Affective Education (Sem. Hrs. Arrngd.)

The workshop offers participants preparation for the utilization of a humanistic, positive communication system in the classroom. Three themes, Awareness, Mastery, and Social Action, are utilized in facilitating student learning via improved communications and problem solving techniques.

PSED 532 Yo Peudo, A Bilingual Peer Leadership Program (Semester hours arranged.)

This course is specifically designed for educators who work with bilingual/bicultural Spanish students at the junior and senior high level. Experiential activities are utilized to get participants in touch with the rich, complicated and sometimes confusing world of the bilingual/bicultural student. Participants learn to help students build and strengthen leadership skills in an environment of positiveness, acceptance and responsibility. Prerequisite: Undergraduate or Graduate Sociology or Anthropology course.

PSED 533 Designing and Implementing Programs for Professional Development (Arranged)

This course will emphasize the knowledge and skills needed for teachers to participate in designing and facilitating their own professional development programs. Teaching styles and activities will be explored, while participants utilize self-assessment to evaluate their needs and establish goals. Strategies for implementation will be discussed.

PSED 541 Introduction to Schools Without Failure (Semester hours arranged.)

This program is built on involvement, relevance and thinking. Much time is devoted to attitudinal change, communication skills, group processes and problem solving. The focus is on meeting the needs of the individual school. Its purpose is to assist principals and teachers in developing a positive, personal philosophy of education; to present a process for developing classroom skills and procedures; to implement a success-oriented curriculum and to provide ways for building constructive communication within the school and between the school and the community.

PSED 542 Discipline in the Classroom (Semester hours arranged.)

This program is designed for participants to take part in learning activities that will enable them to develop positive techniques for handling student behavior problems. This course is aimed at training teachers to use Reality Therapy as a tool in the classroom. It addresses one of the major concerns of the public school: classroom control and behavior change.

PSED 543 Theory and Practice of Schools Without Failure I (Excellence in Teaching) (semester hours arranged)

This course offers participants an opportunity to investigate the effects of school success and failure on the life of a child. Study of these concepts will be taken from the points of view of William Glasser, M.D. in his books *Schools Without Failure*, *Identity Society and Reality Therapy*.

PSED 544 Theory and Practice of Schools Without Failure II (Perception Psychology) (semester hours arranged)

Educators will gain experience in conducting diagnostic class meetings and in providing the educational climate necessary for self-discipline. Curriculum planning related to self-directed learning will be explored. Recent advancements in brain research, psychology and theory will be presented.

PSED 545 Planning for Change (3:3:0)

The goals of quality education will be analyzed as a basis for curriculum change. The relationship between affective education and cognition will be reviewed and assessed through a group process. Systems for change will be developed utilizing personal influence and power. The workshop also help participants acquire additional skill in expanding their knowledge and use of Reality Therapy in the educational environment.

PSED 547 Success-Oriented Reading: Whole Language Development (semester hours arranged)

This course will provide opportunities for participants to explore the reading process from a variety of current viewpoints to help the participants develop their own personal classroom teaching programs and to put these ideas into practice. Prerequisite: ELED/PSED 581 or 582.

PSED 548 Reality Therapy in the Classroom (3:3:0)

This workshop is designed to increase proficiency in the use of Reality Therapy in the classroom. (The course presumes an understanding of philosophy and basic steps.) Emphasis will be placed on acquiring the skills in the implementation of the RT approach in the educational environment. Prerequisite: ELED/PSED 582.

PSED 549 Reducing Classroom Conflict (semester hours arranged)

This workshop is designed to provide participants with skills in developing pathways to build strength and success in themselves and their students. It focuses on specific classroom activities that will help develop a climate for effective self-discipline and positive classroom interaction. Prerequisite: PSED 581.

PSED 552 Together: Mainstreaming In Schools (3:3:0)

The purpose of the workshop is to cause meaningful interaction of special and regular educational teachers. Their interaction enables teachers to review and to develop positive models for their particular schools that allow for exceptional and non-exceptional children to learn together and respect and know each other. A major emphasis will be to devise, through group interaction, a plan for implementation of mainstreaming in the particular schools. The course is cross listed with ELED 552 and SPED 552.

SPED 553 Creative Materials and Methods for Exceptional Individuals (3:3:0)

At the graduate level this course is designed for in-service regular classroom teachers anticipating students with multiple disabilities included in their classrooms, special educators, and other degree holding persons planning to work with individuals with exceptionalities in a rehabilitative setting. Emphasis is on a case by case analysis of client or student needs, and development of appropriate projects for their training and rehabilitation. Small additional fee.

Upon completion, participants are qualified to adopt the Learning to Read Through the Arts program of the U.S.O.E. National Diffusion Network. Accepted for General Education.

REED 547 Success-Oriented Reading: Whole Language Development (Semester hours arranged.)

The course provides opportunities for teachers to explore the reading process from a variety of current viewpoints and to help the participants develop their own personal classroom teaching programs to put these ideas into practice. The course is designed to stimulate new thinking, to have participants experience activities that can be used with students, and to give participants confidence in creating personalized reading activities and materials for their own students. Prerequisites: ELED/PSED 581 or ELED 582. This course is also listed as ELED/PSED 547.

REED 550 Foundations of Reading Recovery I (3:3:0)

This course introduces the principles and procedures of the Reading Recovery program which is based on Marie Clay's theory of emergent and beginning literacy. The course is taught by a certified Reading Recovery Teacher Leader and is conducted at a Reading Recovery site. Enrollment is limited and departmental approval is required.

REED 551 Foundations of Reading Recovery II (3:3:0)

This course extends and refines the student's understanding and use of the principles and procedures of the Reading Recovery program introduced in REED 550. The course is taught by a certified Reading Recovery Teacher Leader and is conducted at a Reading Recovery site. Enrollment is limited and departmental approval is required. Students who successfully complete both REED 550 and REED 551 will be certified as Reading Recovery Teachers.

REED 565 Special Topics in Reading (Semester hours arranged.)

These courses deal with specific aspects of reading instruction to meet the needs of graduate students or to determine the value of introducing them as part of the university curriculum. Competency prerequisites.

REED 570 Reading Workshop (Semester hours arranged.)

A professional program designed to examine intensively current trends in reading instruction for inservice teachers.

REED 575 Reading Colloquium (Semester hours arranged.)

This course is designed to deal with pertinent contemporary problems in reading. Results oriented techniques for setting performance objectives and analyzing performance competencies will be stressed. Competency prerequisites.

REED 577 Independent Study in Reading (Semester hours arranged.)

Under the auspices of a qualified member of the faculty of the graduate school, the student pursues a pattern of reading, study, and research related to professional knowledge and understanding in reading. Topics should be established prior to enrollment.

REED 580 Research Problems In Reading (3:3:0)

The course is designed to assist the student in identifying important problems in the field of reading, critically analyzing available research, and synthesizing possible solutions. Competency prerequisites.

REED 589 Field Experience in Reading (3:1:4)

This course is a two (or three) week field experience under the guidance of a Reading Specialist in the Public Schools. The student will (1) observe him/her in all phases on his/her work, (2) following observation, the student will assist the Reading Specialist and (3) gradually assume teaching responsibilities for the various instructional groups as the Reading Specialist may deem feasible. The program will be supervised by a member of the Reading Department.

Recreation and Leisure Services

RECR 501 Outdoor Environmental Education Workshop (3:2:2)

This course will develop teaching and leadership techniques for outdoor environmental education through participation in a variety of activities. The student will develop practical projects for use

in his/her own teaching or outdoor leadership situation. The class will visit local conservation and natural resource sites.

RECR 541 Outdoor Recreation (3:3:0)

This course is a study of the organization and administration, history, theory, philosophies, programs and facilities of outdoor recreation agencies. The course will include field trips to representative outdoor recreation areas.

RECR 542 Organization and Administration of Recreation (3:3:0)

This course is a study of the organization and administration, history, theory, philosophy, settings, and problems of recreation and leisure. Emphasis on recreation facilities, finance, legislation, public relations, and the selection and training of staff.

RECR 552 Playground Safety and Supervision (3:2:2)

This course will examine the role of play in child development and the history and current status of playground facilities in schools, parks and other public settings. The course will focus on current planning and design principles and current acceptable practices in the management and maintenance of playgrounds and supervision of children on playground equipment. Field trips will be taken to area playgrounds for safety inspections of existing equipment.

Safety

SFTY 505 Principles of Safety (3:3:0)

An overview of the safety field - its philosophy, disciplines, and research; an examination of the causes and extent of accidents and the principles and methods of prevention. This course will not be accepted for General Education credit.

SFTY 511 Safety in Sport (3:3:0)

The philosophy of and research in sports safety are studied. Human and environmental factors and their interrelationships in sports injury and its control; risk-taking and decision-solution strategies; application of accident prevention and injury control to selected sports; and contributions of sports medicine to safety.

SFTY 515 Human Factors in Accident Prevention (3:3:0)

This course is a study of personal factors related to safe and unsafe living and driving; the effect of attitudes, emotions, motivations, and adjustments on behavior; research on accident causation; investigation of principles and methods employed in identifying, understanding, and modifying unsatisfactory attitudes and behavior; accident preventions.

SFTY 521 Methods and Materials in Traffic Safety (3:3:0)

This is a course in the survey of and research in the accepted methods of instruction, including lab work in simulation, range, and multimedia teaching, as well as an examination of various literature dealing with safety.

SFTY 531 Traffic Safety (3:2:3)

This course focuses on basic teacher preparation coverage of the standard thirty and six high school courses; it includes all facets of classroom instruction and research, as well as behind-the-wheel-teaching progression and techniques.

Sociology

SOC 531 Foreign Study Tour: South America

SOC 532 Foreign Study Tour: Africa

SOC 533 Foreign Study Tour: Western Europe

SOC 534 Foreign Study Tour: Eastern Europe

SOC 535 Foreign Study Tour: Asia

SOC 536 Foreign Study Tour: Australia & New Zealand

SOC 522 Seminar: Foreign Travel and Study (6:0:12)

This course is a study in various areas of the world focusing on the culture, history and government of the countries visited; their economic growth and integration. Emphasis is placed on formal and informal discussion and analysis of contemporary indigenous problems.

SOC 523 Theory and Practice in Groups (3:3:0)

The focus of this course is small group theory and practice as applicable to social work practice. Social work intervention with family groups, problem-centered groups, and social action focused groups will each be examined. Focus will be both on developing understanding of group dynamics and group process, and developing skills in group work practice.

SOC 561 Social Change (3:3:0)

This course examines basic concepts of social change; external factors initiating change; changes in the physical and social environment; factors affecting acceptance of an innovation, chain reaction effects of an intervention; internal affairs affecting change; the growth of cultural complexity; and differential rates of change.

SOC 562 Population Problems in International Affairs (3:3:0)

This course examines population factors as they influence international relations; typical examples are chosen from various parts of the world; both unique and common elements are investigated and solutions suggested; study of race relations in the contemporary world is included.

SOC 563 Social Stratification (3:3:0)

This course considers recent research on social stratification and its bearing on behavior in elite and mass society; it includes a study of the relationship of social class to poverty, personality, attitudes and ideologies, modes of living and alignments, including class influences on life's chances.

SOC 564 Sociology of Education (3:3:0)

This course is an analysis of education using basic sociological concepts. Emphasis on schools and colleges as social systems, school-community inter-relations, the sociology of professions and education in its societal concept. The course may also be taken as PSED 511.

SOC 565 The Evolution of Culture (3:3:0)

This course examines the evolution of culture and the nature of social organization. The analysis of the structure and functions of human social systems, their integration, regulation, and control including use of energy and technology.

SOC 566 Criminology (3:3:0)

This course examines theories of crime causation; demographic characteristics of criminals; the history of theories of punishment; and modern reformatory and rehabilitative methods.

SOC 567 Personality, Culture and Society (3:3:0)

This course is an analysis of the interrelationship between human personality and culture, nature, and society, using the methodological tools of the social sciences. Particular emphasis will be placed on the theoretical conceptions surrounding the nature of human nature and the development of human personality. Age and sex factors, social class, racial prejudice, and religion will be among the numerous cultural and social factors which will be analyzed.

SOC 568 Racial and Cultural Minorities (3:3:0)

This course is an analysis of dominant minority relations in the United States from the perspective of both the historical and the contemporary with special emphasis upon black-white relations in American society today. The nature and results of prejudice and discrimination, and the realization of social justice will be among the more important areas of dominant-minority relations to be

discussed.

SOCJ 537 Schools, Gangs, Violence and Society

This course will examine the various aspects of violence as they relate to the school setting. It will take an in-depth look at gangs, weapons, and drugs in the school environment. This course will discuss some of the more recent approaches from law enforcement perspective that have worked in combating school violence.

SOSW 569 Experimental Seminar in Guided Imagery Techniques for Social Workers (3:3:0)

This is an experimental course dealing with the nature and use of guided imagery for social workers or other mental health practitioners. Various approaches, techniques, and uses of guided imagery will be demonstrated and analyzed. Prerequisite: General background in social work. Permission of instructor.

Special Education

SPED 535 Classroom Diversity: Creating a Positive Environment (3:3:0)

This course encourages educators to identify their own values, prejudices, and goals; to examine their thoughts and/or misconceptions about culturally diverse communities. Designed to help them create school climates that celebrate diversity and meet the needs of students of different races, ethnicities, gender, and ability levels.

SPED 540 Language Arts for the Exceptional Individuals (3:3:0)

This course is designed to develop a knowledge of remedial techniques and special curricular considerations for teachers who work with individuals moderately, severely or multiply disabled language impaired.

SPED 550 Nature and Needs of Individuals With Exceptionalities (3:3:0)

This course deals with individuals having educational impairments including: identification and etiological factors; psychoeducational needs of emotionally disturbed, mentally handicapped, learning impaired, or severely physically disabled persons; community and professional services. Required for those students with limited experience in special education.

SPED 551 Inclusionary Practices (3:3:0)

This course is intended for administrators, counselors, psychologists, curriculum supervisors, all teachers (regular, special), and school nurses concerned with providing appropriate educational experiences for students with special education needs in regular educational setting. Required for special education certification.

SPED 552 Together: Mainstreaming in Schools (3:3:0)

The purpose of the workshop is to cause meaningful interaction of special and regular education teachers. The interaction enables them to review and to develop positive models for their particular schools that allow for exceptional and non-exceptional children to learn together, to respect each other, to know each other. A major emphasis will be to devise, through group interaction, a plan for implementation of mainstreaming in the particular schools. The course is cross listed with ELED 552, PSED 552 and SPED 500.

SPED 553 Creative Materials and Methods for Exceptional Individuals (3:3:0)

At the graduate level this course is designed for in-service regular classroom teachers anticipating students with multiple disabilities included in their classrooms, special educators, and other degree holding persons planning to work with individuals with exceptionalities in a rehabilitative setting. Emphasis is on a case by case analysis of client or student needs, and development of appropriate projects for their training and rehabilitation. Small additional fee.

SPED 554 Curriculum and Instruction for Individuals with Mild Disabilities (3:3:0)

This course is designed to provide a basis for the development of individualized curriculum goals and instruction for students with mild disabilities.

SPED 555 Curriculum and Instruction for Individuals with Moderate/Severe/

Profound Disabilities (3:3:0)

This course is designed to provide a basis for the development of individualized curriculum goals and instructions for students with moderate/severe/profound disabilities.

SPED 566 Applied Behavior Analysis (3:3:0)

This course will cover the basic concepts of behavior analysis as applied to a variety of situations in teaching individuals with exceptionalities. Classroom management utilizing nonaversive behavior management techniques will be presented. Open to all students of graduate standing.

SPED 567 Families in the Educational Process of Individuals with Exceptionalities (3:3:0)

The purpose of this course is to develop skills in working with parents of youths with exceptionalities. Attention will be given to conferencing, reporting, and instructing parents in the process of home training. Further attention will be given to directing parents toward community services and resources, developing school initiated parent support groups.

SPED 568 Early Intervention in Special Education (3:3:0)

This course is designed to develop skills in the identification and referral of preschool-age children with exceptionalities, determining training targets for this group, implementing alternative programs for individuals with multiple disabilities, developing appropriate preschool training environments, and implementing an adapted curriculum.

SPED 570 Collaboration in the Educational Process (3:3:0)

This course is designed to prepare special educators to function as consultants to regular education teachers and other school personnel. The use of consultation is reviewed at the pre-referral, referral and mainstreaming level of service. The goals for this course include student competence in consultation concepts and skills in working with classroom teachers.

SPED 572 Thesis I (3:0:0)

This course consists of the development of a thesis topic and review of the literature, writing and editing of the thesis and submission of the final paper to peer-reviewed journal. Prerequisites: ELED 570; SPED 566.

SPED 573 Thesis II (3:0:0)

This course consists of the development of a thesis topic and review of the literature, collection of data, writing and editing of the thesis. Prerequisites: ELED 570; SPED 566.

SPED 575 Seminar: Research Problems in Special Education (3:3:0)

This course will develop student awareness of critical issues in special education which have relevance for research concerns. Additionally, appropriate and feasible research designs and techniques are discussed within the framework of current special education methods and procedures. Required for Master's thesis. Prerequisites: ELED 570; SPED 566.

SPED 580 Seminar: Administration and Organization of Special Education (3:3:0)

The course is designed to review traditional and emerging leadership roles and organizational approaches in special education. The student will review, assess, and discuss implications of new mandates for human services. Objectives include evaluation of current delivery systems.

SPED 581 Measurement and Evaluation in Special Education (3:3:0)

This course utilizes a variety of measures to assess and evaluate the educational, behavioral and developmental areas of students with exceptionalities using traditional and alternative assessment instruments based upon the results of these measures. Prerequisite: SPED 550.

SPED 582 Seminar: Current Issues in Special Education (3:3:0)

This seminar is designed for all graduate students in the field of education who are interested in current issues arising out of litigation and legislated mandates within the field of special education. An emphasis will be placed upon issues which are presently affecting (and will continue to shape) services to learners with exceptionalities, regular and special education professionals, and administrators. Attention will also focus upon a class member's individual/professional concerns in the special education arena.

SPED 583 Seminar: The Emotionally Disturbed (3:3:0)

The course will provide the student with a current overview of the field of education for students with emotional disturbances. Objectives include an awareness of conceptual models and program activities toward ameliorating impact of maladaptive behaviors. Prerequisite: SPED 550.

SPED 584 Seminar: Vocational and Career Education for Exceptional Individuals (3:3:0)

This course is designed to help the teacher to develop new skills and to find innovative means for career and vocational-technical planning and training with individuals with exceptionalities. Prerequisite: SPED 550.

SPED 588 Seminar: The Resource Room (3:3:0)

The course is designed to examine the Resource Room as an alternative delivery system in extending services to students with exceptionalities. Course work is designed to enhance students' skills in individualizing programs using diagnostic/ prescriptive procedures. Prerequisite: SPED 550.

SPED 589 Curriculum Issues in Special Education (3:3:0)

This course will focus on the development, implementation, and evaluation of special education curriculum. This will include problems of programming for students with exceptionalities; different curriculum approaches and review of research implications. Prerequisite: SPED 550 or enrolled in the Special Education Supervisory Certificate Program.

SPED 590 Seminar: Teaching Individuals with Learning Disabilities (3:3:0)

The purpose of this course is to broaden the in-service teacher's knowledge of the characteristics of the student with learning disabilities, instructional models and programmatic planning, solving real-life management problems, material problems, and teaching problems, in a sharing and seminar setting. Prerequisite: SPED 550.

SPED 592 Seminar: Teaching Individuals with Physical Disabilities (3:3:0)

The course deals with appropriate educational interventions. Teaching skills are complimented with medical and technical advances. Objectives include amelioration of effects of physical disabilities toward possible mainstreaming. Prerequisite: SPED 550.

SPED 594 Seminar: Teaching Individuals with Mental Retardation (3:3:0)

This course will cover theories of intelligence, retardation, etiological factors of mental retardation, curriculum needs of mental retardation, methods and materials of instruction, an overview of career considerations, and emerging trends for adult services.

SPED 596 Internship in Special Education Supervision (3:1:4)

This supervised field experience is designed to provide the candidate for the *Special Education Supervisor* certificate with field experiences in personnel supervision, assessment techniques with the exceptional population, budgeting and financing for special class operation, participating in child study team conferences, curriculum development, and due process. Prerequisite: All courses listed for the Supervisory Certificate Program

Speech-Language Pathology

SPPA 510 Neural Bases of Communication Disorders (3:3:0)

This course will provide a comprehensive study of the neuro-anatomical and neurophysiologic bases of the speech, language and hearing mechanisms. Structures and functions of the nervous system involved in these mechanisms will be studied. The relationship between pathologic conditions of the nervous system and communication disorders will be covered. Prerequisite: SPPA 214 or equivalent.

SPPA 521 Augmentative/Alternative Communication (3:3:0)

This course will address the issues surrounding the selection of augmentative/alternative communication for populations unable to communicate using speech due to motor, mental or language disabilities. Various augmentative devices will be presented.

SPPA 523 Multicultural Issues in Speech-Language Pathology (3:3:0)

This course will focus on identification, assessment, intervention and prevention of communication disorders in diverse linguistic and cultural populations, including all age groups. Since this course is offered for undergraduate credit also, a differentiation of requirements will be made.

SPPA 534 Clinical Audiology (3:3:0)

This course is designed to familiarize graduate level speech pathology students with pathological processes of the peripheral and central auditory systems and how these affect communication. Students will know how to interpret audiometric test data. Prerequisite: SPPA 231, Introduction to Audiology.

SPPA 535 Aural Rehabilitation (3:3:0)

This course will address methods for educating children and adults with hearing losses and investigate current surgical and assistive intervention strategies. This will include a survey of hearing aids. Prerequisites: SPPA 231, Introduction to Audiology or SPPA 534, Clinical Audiology.

SPPA 536 Advanced Sign Language and Related Topics (3:3:0)

This course will focus on advanced sign language skills. Emphasis will be placed on expanding the students' sign language vocabulary, phrasing, sentence structure and interpretation of signs. Related topics will include deaf culture, deaf education, assistive technologies, and deaf people in society. Prerequisite: SPPA 131, Introduction to Sign Language or equivalent.

SPPA 541 Phonological Disorders – Assessment and Intervention (3:3:0)

The course will focus on the practical application of phonological theory to techniques and procedures used for the assessment and intervention of speech disorders. It will include an analysis of the application of phonological theory to linguistic diversity. Prerequisites: SPPA 241, 342, 343, 357, and 358.

SPPA 542 Language Disorders in Children (3:3:0)

This course will address the nature, etiology, and clinical management of children with language disorders, with primary emphasis on children from birth through age 12 years. Prerequisite: SPPA 101 or equivalent.

SPPA 543 Language Disorders in Adults (3:3:0)

This course will address the nature, etiology, and clinical management of adults with acquired language disorders in adults, with primary emphasis on aphasia and related cognitive disorders. Prerequisite: SPPA 101 or equivalent.

SPPA 544 Fluency Disorders (3:3:0)

This course is designed to provide a comprehensive analysis of the theories of stuttering, diagnostic procedures and treatment strategies. Behaviors related to stuttering will be examined. Current research literature for the management of stuttering will be included. Prerequisite: SPPA 357 and 358.

SPPA 546 Voice Disorders (3:3:0)

This course will address the nature, etiology, and clinical management techniques for individuals who have voice disorders resulting from both hyperfunctional and organic etiologies. Prerequisite: SPPA 214.

SPPA 550 Advanced Clinical Practicum (2:0:2-6)

This course is designed to provide supervised, advanced clinical practice in applying diagnostic procedures and intervention strategies to preschoolers through adults who have speech, language and/or hearing disorders. Specific communication disorders may include phonology, articulation, fluency, voice, language, and hearing. Developing skills to work with diverse linguistic populations will also be emphasized. Clinical experience will be available at the University Speech and Hearing Clinic. Students must take this course at least twice for credit. If a student earns a grade of C or lower, this course must be repeated and a B or better earned. Anyone earning a second C will be dismissed from the program.

SPPA 560 Diagnostic Procedures in Speech-Language Pathology (2:2:0)

This course addresses the methods used for assessment procedures in speech and language pathology. The student will gain experience in testing, observation, decision making and report writing. Co-requisite course: SPPA 561, Diagnostic Practicum.

SPPA 561 Diagnostic Practicum (2:0:4)

This course allows the student to gain experience as a diagnostician. Each student will complete full assessment procedures on speech and language impaired individuals. Co-requisite course: SPPA 560, Diagnostic Procedures in Speech-Language Pathology.

SPPA 562 Dysphagia (3:3:0)

This course addresses the nature, etiology, and clinical management of dysphagia (swallowing disorders).

SPPA 563 Adolescent Language Learning Disabilities (3:3:0)

This course addresses the nature, etiology, and clinical management of language learning disabilities common in older school age children and adolescents, with particular emphasis on language use in classroom contexts.

SPPA 568 Alaryngeal Speech Rehabilitation (3:3:0)

This course is an investigation of the physical and functional changes caused by a laryngectomy. Theory and techniques for various means of speech rehabilitation will be presented. Prerequisite: SPPA 214.

SPPA 569 Motor Speech Disorders (3:3:0)

This course addresses the nature, etiology, and clinical management of motor speech disorders, with primary emphasis on apraxia and the dysarthrias.

SPPA 572 Thesis (3:0:0)

This course will focus on the development of a thesis problem, the design of a research plan, collection and analysis of data, and writing of a formal thesis report.

SPPA 574 Orofacial Anomalies (3:3:0)

This course will target the nature and rehabilitative procedures for individuals with congenital and acquired orofacial anomalies. Prerequisite: SPPA 214 or equivalent.

SPPA 575 Communication Disorders Resulting from Traumatic Brain Injury (3:3:0)

This course addresses the nature, etiology, and clinical management of communication disorders resulting from traumatic brain injury. Prerequisite: SPPA 214 or equivalent.

SPPA 577 Independent Study (3:hours arranged)

This course of study is designed to allow the student to pursue, in depth, a professional area of interest. The topic to be studied may be further research of an area covered in another class, or study of a new topic of interest to the student.

SPPA 582 Management of School Programs in Speech-Language Pathology (2:2:0)

This course will address topics involved in the management and development of Speech-Language Programs in the schools. Procedures for enrolling students into programs, techniques for classroom intervention and pull-out therapy will be studied. Various related topics will also be introduced. This course is required by individuals seeking professional certification in Teaching Speech-Language Impaired Students. Prerequisites: PSED 161, 242; ELED 232; REED 315; or graduate equivalents.

SPPA 583 Public School Practicum**SPPA 584 Research Methods and Materials in Speech-Language Pathology and Audiology (3:3:0)**

The course addresses research methodologies and problem solving related to speech pathology and audiology and its literature with an applied emphasis.

SPPA 586 Advanced Clinical Externship (1-6 semester hours arranged)

This course is designed to provide supervised, advanced clinical practice, at off-campus sites, in applying diagnostic procedures and intervention strategies to preschoolers through adults who have speech, language, and/or hearing disorders. Specific communication disorders may include phonology, articulation, fluency, voice, language and hearing. Developing skills to work with diverse linguistic populations will also be emphasized. This course may be repeated for credit. No student may graduate with a C in this course. If a student earns a C or lower, this course may be repeated only one time to improve the grade. A grade of B or better must be earned in this course for a student to be approved for graduation.

Theatre

THTR 511 Fine Arts and Ideas (3:3:0)

Members of the Art, Music and Theatre Faculties offer this integrated study of humanistic values in the visual and performing arts. Students will have the opportunity to focus on specialized areas of interest through discussion and research. Prerequisites: Baccalaureate degree or permission of instructor. The course is also offered as ART 511 or MUS 511.

THTR 520 Myth and Ritual in Theatre (3:3:0)

This course explores myth and ritual as they relate to theatre both in its primitive foundations and in its modern applications. The use of masks and various primary aspects of theatre and acting will be examined. The course will culminate in an informal performance, reflecting elemental acting skills as they relate to mythological and ritualistic foundations of theatre. No previous acting experience is necessary. Students taking this course for graduate credit must complete a project based on appropriate research.

THTR 561 Summer Theatre Workshop (semester hours arranged)

Students who enroll in this intensive Theatre-Workshop will participate in all phases of theatre productions. Workshop students will participate in weekly critique sessions. Both self and group evaluative techniques will be utilized. Guest critics will be invited as participants in the critique sessions. The individual student's participation in the workshop will be tailored to individual needs and abilities.

THTR 577 Independent Study in Theatre (semester hours arranged)

Under the auspices of a qualified member of the theatre faculty of the graduate school, the student pursues a pattern of readings, study, and research resulting in a project related to professional knowledge and understanding in theatre. Topics should be established prior to enrollment. Prerequisite: Approval of the Department Chairperson.

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