
Graduate Study

Graduate Admissions

Admissions Office
Miller Building, First Floor
(607) 753-4711
e-mail: admissions@cortland.edu
www.cortland.edu/gradstudies/

The State University of New York at Cortland offers you the opportunity to take courses leading to a master of arts, a master of science, a master of science in education, a master of arts in teaching, a master of science in teaching, as well as a certificate of advanced study. The certificates of advanced study are post-master's programs with concentrations in American Civilization and Culture (this program is for international students only), School Administrator Supervisor, and School Business Administrator.

You may enroll in graduate-level courses on a full-time or part-time basis. Most courses are offered in the late afternoon and evening, Monday through Thursday, to accommodate students who commute. A selection of graduate courses is available during Summer Session and at Cortland's Mohawk Valley Graduate Center, an off-campus center in Rome, N.Y.

Graduate students, attending full-time or part-time, are entitled to all campus privileges, including the use of library and recreational facilities. You also have access to both personal and career counseling.

Graduate Opportunities

SUNY Cortland offers you the opportunity to enroll in (1) advanced degree programs for professionals in a variety of specialized disciplines; (2) special programs for those seeking teaching and school administration certification; and (3) enrichment courses and programs for those seeking post-baccalaureate continuing learning opportunities.

500-599 courses are designed for the graduate student. But this level of course work is open to juniors and seniors in good academic standing (cumulative grade point average of 2.0).

600-699 courses are exclusively for students at the graduate level.

Admission to Graduate Study

If you plan to apply for a master's degree or certificate of advanced study program you will need the following:

1. A bachelor's degree from an accredited college or university; for the certificate of advanced study you will need a master's degree.
2. You will need to submit an application for admission to graduate study (obtained from the Admissions Office or the Graduate Studies Office) along with the \$50 application fee by the following deadlines:

<u>Entry Term</u>	<u>Application Due Date</u>
Fall	August 1
Spring	January 1
Summer	May 1

Completion of application requirements by the stated deadline is the responsibility of each applicant. Completed applications received after the deadline will be considered for the following term.

3. You will need to fulfill the specific admissions requirements of the department of the College in which enrollment is sought. Departmental requirements are listed with the descriptions of graduate curricula.

4. In degree programs leading to permanent New York State teacher certification, individual departments require that applicants have provisional certification (or a certificate of qualification for provisional certification) before you will be eligible for admission to degree status. Some departments may require that provisional certification be obtained before candidacy for the degree is approved.
5. If you have a lapsed certificate you may be admitted to teaching degree programs at the discretion of the department.
6. The Master of Arts in Teaching (MAT) and the Master of Science in teaching (MST) degree programs do not require prior provisional certification.
7. Some departments require letters of recommendation.

International Student Admission

SUNY Cortland welcomes applications from foreign nationals seeking matriculation into graduate programs. Prospective students are sent the following materials, which must be returned to the SUNY Cortland Admissions Office unless otherwise designated.

- Cortland's Graduate Studies Application along with the \$50 (U.S. dollars only) application fee
- Application for International Students (English proficiency report, essay and financial support statement)
- TOEFL (Test of English as a Foreign Language) exam report
- Graduate Record Exam (GRE) score report if required by the department
- Official college transcripts with professional translation of all documents into English along with the original documents

Applications will be reviewed for admission based on academic accomplishments, ability to finance the education and level of proficiency in the English language.

Immigration form I-20, which the applicant will use to secure an F-1 visa, will be issued to the applicant once all required information has been received and the applicant has been accepted to the College.

Mohawk Valley Graduate Center

The Mohawk Valley Graduate Center, operated by SUNY Cortland in Rome, N.Y., only offers graduate courses leading to master's degrees in childhood education, literacy education and health education, as well as the post-master's degree program leading to the Certificate of Advanced Study in educational administration and supervision. The Mohawk Valley Graduate Center, supervised by the director of graduate studies and outreach services, may be contacted by calling (315) 339-2556.

Part-Time Graduate Study

Graduate Studies Office
Brockway Hall, Room 122
(607) 753-4800

Registration and Schedule Adjustment

Services for part-time degree graduate students are provided by academic departments. Services for non-degree community residents are provided by the Graduate Studies Office.

The Graduate Studies Office hours are Monday through Friday, 8 a.m.- 5 p.m. The telephone number is (607) 753-4800.

Part-time and Non-degree Status

Graduate students may enroll in courses on a part-time, non-degree basis by registering through the Graduate Studies Office.

Graduate students may attend day or evening classes as part of a degree program on a part-time or full-time basis. In order to work toward a degree, students must be admitted formally to degree status. Details may be obtained from the Admissions Office.

Graduate non-degree students (NON) may not register for more than 9.0 credit hours. Once a non-degree graduate student (NON) has earned 9.0 graduate credit hours at SUNY Cortland, they must apply through the Admissions Office for matriculated status, change their status to non-degree seeking (NDEG) or discontinue course work at Cortland. Financial Aid (including student loans) is available only to students who have been accepted into a degree program at SUNY Cortland.

Identification Cards

All students who register for courses at the College are required to have a SUNY Cortland I.D. Card. For more information, refer to page 299 in this catalog.

Academic Policies

Non-matriculation Attendance

If you hold a bachelor's degree and wish to attend graduate courses on a part-time, non-matriculated basis, you may do so by registering for the courses. All prerequisites for the courses in which you plan to enroll must be fulfilled.

Non-matriculated students are not assigned advisors and register after degree students. If you wish to become matriculated or pursue a degree, you will need to apply formally for admission by the time you complete nine credit hours.

Registration

All graduate students register for classes through the Graduate Studies Office. Registration forms are available in the course listings schedule for each academic term and certain detailed instructions about preregistration, billing and general registration. The registration forms may be obtained from and delivered to the Graduate Studies Office.

Registration

All graduate and non-degree students register for courses through the Graduate Studies Office. The Course Schedule including the registration form and a chart of tuition and fee charges are mailed to graduate and non-degree students who have recently attended (for the current or one of the last three terms) during the latter part of October and March. Registration forms and correct payment must be received in the Graduate Studies Office by the deadline dates published in the Course Schedule.

Eligible students who do not register during the official registration period may enroll and pay at the time of registration on a continuous basis up until the beginning of the term, or register the day before classes begin during the graduate and non-degree general registration beginning at 5 p.m. Matriculated graduate students may register without payment until the deadline date for billing privileges established in the semester course schedule.

Students who do not pay their tuition bill for the courses for which they have registered by the payment deadline will be de-registered.

Summer Session

A summer session schedule of courses, programs and services is published early in the spring semester. Graduate courses are available in two consecutive five-week sessions.

Graduate Financial Aid

Information on financial aid can be obtained from the Financial Aid Office, SUNY Cortland, P.O. Box 2000, Cortland, N.Y. 13045, (607) 753-4717.

Full-time Graduate Status

You qualify as a full-time graduate student if you satisfy one of the following:

1. If you are registered for nine credit hours (see note below) or more of course work.
2. Have been awarded a graduate assistantship and are registered for six credit hours or more.
3. If you are registered for and working full-time on a thesis or independent study.

Note: The full-time definition above does not apply to any student accounts or financial aid issues such as tuition/fee charges, federal financial aid (including student loans), state financial aid, veteran's benefits, or scholarships. The minimum full-time definition for all financial purposes is 12 credit hours per semester.

Minimum Average Required for Master's Degree and Certificate of Advanced Study

Students enrolled in a master's degree or certificate of advanced study program are required to maintain a minimum 2.8 cumulative grade point average in graduate work and will be dismissed from the College if they do not maintain the minimum average.

Notification of dismissal will be made in writing by the dean of the appropriate school. No grade below C- will be counted toward a master's degree or a certificate. The master's degree or certificate of advanced study will not be awarded to students who have lower than a 3.0 grade point average, both in the courses offered for the degree and in all graduate courses completed at SUNY Cortland.

Minimum Average Required for Non-matriculated Students

Students enrolled in graduate courses at SUNY Cortland for their personal interest and enrichment, rather than for a degree or certificate, are subject to the same standards for graduate study as those enrolled in degree or certificate programs. Non-matriculated students with grade point averages between 2.0 and 2.79 may be permitted to enroll for graduate courses at the discretion of the director of graduate studies and outreach services.

Change of Major

If you want to transfer from one degree curriculum to another you must have the approval of the department supervising the new degree program and the dean of the appropriate school. Change of major forms are available in the offices of the deans. The department in which the student wishes to pursue degree or certificate study has the prerogative to accept or refuse courses completed as part of another curriculum.

Prerequisites

Students enrolled in courses at the graduate level are expected to have the appropriate preparation to enable them to participate fully in those courses. They are responsible for any prerequisites listed for the specific graduate courses.

Undergraduate Students in Graduate Courses

FOR UNDERGRADUATE CREDIT

500-599 courses are designed for both the graduate and undergraduate student and are conducted at the graduate level. This level of course work is open to juniors and seniors in good academic standing (cumulative grade point average of 2.0).

FOR GRADUATE CREDIT

Seniors in their final semester of undergraduate study may request permission to register for courses at the 500-level for graduate credit. Approval must be obtained from the director of graduate studies and outreach services. A form for this purpose is available in the office of the director of graduate studies and outreach services.

Students may not receive graduate credit for courses needed to satisfy undergraduate graduation requirements. The total course load, including undergraduate and graduate credit, may not exceed 16 credit hours during the semester or eight credit hours during a five-week summer session. Students are cautioned that graduate credit thus earned may not be transferable toward meeting the requirements for the master's degree at another institution.

Incomplete Grades

Work required for incomplete graduate courses (IN) must be completed within one year. The grade of E (failure) automatically is assigned for incomplete courses at the end of one year.

Withdrawal

Graduate students who withdraw from the College for any reason are subject to the procedures described in the academic policies section of this catalog. In addition, graduate students who are withdrawing are expected to notify the director of graduate studies and outreach services.

Retaking Graduate Courses

Graduate students may retake a particular graduate course only once and the student's cumulative average will reflect only the last grade received. The grade excluded from the cumulative average will be annotated with "E" on the transcript. You must file a retake form at the office of the director of graduate studies and outreach services at the beginning of the semester during which the course will be retaken.

Pass/No Credit Option

Courses taken on a Pass/No Credit basis may not be applied to a SUNY Cortland graduate degree or certificate program. If you are a non-matriculated student you may take graduate courses for which you are qualified on a Pass/No credit basis. However, courses taken on a Pass/No credit basis may not be later applied toward a SUNY Cortland degree or certificate program. If you are a matriculated student you may not undertake any course applicable to a Cortland degree or certificate program on a Pass/No Credit basis. Only work of "C" quality or better may receive a pass grade and you must complete all required work for the course.

Transfer of Academic Credit

Graduate students can not transfer more than six semester hours of graduate work from an accredited institutions after candidacy for the degree is attained. Such transfer credit must have been completed within five years prior to first graduate registration at Cortland. Since all such courses must fit into a specific curriculum of SUNY Cortland, prior approval by the department of specialization should be obtained for all courses to be transferred after course work is begun at Cortland. Special forms for this purpose are available in the office of the director of graduate studies and outreach services. Only courses with grades of A or B will be transferable. Transfer credit may be applied to the fulfillment of course requirements but is not computed in the grade point average.

Degree Candidacy

After admission to a degree program, the student must complete, at Cortland, six credit hours of graduate courses approved by the department in which the graduate degree program is being pursued. If the grades are As or Bs (not B-) in these approved six hours of course work, the student should file for candidacy for the degree. Students are expected to complete at least 15 credit hours of course work after establishing candidacy for the degree. Application for Candidacy forms are available in the office of the director of graduate studies and outreach services.

In programs where completion of the master's degree partly fulfills requirements for permanent certification to teach in New York State, requirements for provisional certification in the teaching area must be met before candidacy for the degree can be approved.

Completion of a Degree or Certificate Program

When a graduate degree or certificate program is nearing completion, students must complete an Application for Graduation form and, if applicable, a teaching certificate affidavit. Application forms are available at the Graduate Studies Office. While the College has established three graduation dates for both undergraduate and graduate students (May, August and December), formal commencement ceremonies are conducted only in May. Students graduating in August or December of a given year are eligible to participate in the graduation ceremonies held in May of that year.

The following deadlines are established for filing an application for graduation and payment of the teaching certificate fee of \$50 (payable to State Education Department): Nov. 1 — December graduates; March 1 — May graduates; and June 1 — August graduates. Eligible students not meeting these deadlines will automatically be placed in the next graduating class.

Requirements for the Award of Master's Degrees or Certificates of Advanced Study

The following requirements have been established for the award of master's degrees and certificates of advanced study at State University of New York College at Cortland:

1. The master's degree program shall include a minimum of 30 credit hours of graduate-level courses approved by the department of specialization. The Certificate of Advanced Study in American Civilization and Culture requires 18 credit hours of graduate course work and the Certificate of Advanced Study in School Administration and Supervision requires 30 credit hours beyond the master's degree.
2. According to New York State Education Department regulations, effective February 2, 2004, all graduate degree requirements leading to the professional teaching certificate must be completed within three years of receipt of the initial teaching certificate. For candidates enrolled in graduate programs leading to permanent teaching certification that are completed by December 2003, and for all nonteaching degree programs, all graduate degree requirements must be completed within five years after the date of the first graduate enrollment, even though such enrollment may be on a non-matriculated basis. Any non-matriculated student that has taken courses prior to the Fall 2001 semester and has not officially been admitted to a graduate degree program will be required to satisfy the new reregistered programs.

3. A minimum grade point average of 3.0 in graduate work must be maintained.
4. No grade below C- will be counted toward a master's degree or a certificate.
5. A minimum of nine credit hours in a degree program must be taken in courses at the 600-level.
6. A maximum of six credit hours may be approved for transfer credit by the department of specialization. Credit hours offered for transfer credit toward a degree must have been completed within five years prior to registration for the first graduate course taken at Cortland.
7. Every master's degree program at Cortland will include satisfactory completion of at least one of the following special requirements, in addition to regular classroom work. The student will be advised by the major department regarding which of these options will be available.
 - A. A comprehensive examination in the area of study. The examination may not be taken before candidacy for the degree is established. It may be repeated according to regulations established by individual departments, but shall not be taken more than three times.
 - B. A thesis prepared under the supervision of the department of specialization and subject to the Standards of Graduate Study at Cortland, acceptable for a maximum of six credit hours of the required program. Formal approval of the thesis topic will not be granted until after candidacy for the degree is established. Theses will be submitted in proper form and prepared in accordance with *A Guide for the Preparation of Theses* which is available from the offices of the school deans unless a department specifically designates the use of an alternative format.
 - C. An independent special project for up to six semester hours of credit, as determined by the department of specialization. Formal approval of the plan for this special project may not be obtained until after candidacy for a degree is established.

Requirements for New York State Teaching Certificate

Note: New teacher certification requirements will take effect for those candidates graduating after December 2003. Consult your department for specific requirements.

Criteria for Admission to the Teacher Education Program

Specific criteria exist for admission to each teacher education program. Minimum undergraduate cumulative grade point average for admission into graduate-level teacher education programs is 2.5 on a 4.0 scale; however, some programs require a higher undergraduate grade point average. Letters of recommendation, interview and test scores may also be required. Consult department or your specific program as listed in the catalog for details. In addition, all applicants for teacher education programs are required to file an Application to the Teacher Education Program.

Examinations for Teacher Certificates

A person making application for a New York State teaching certificate will be required to achieve a passing score on the appropriate tests in the New York State Teacher Certification Examinations (NYSTCE) Program. Certification test requirements will change after December 2003. Consult your department for details. The NYSTCE information and registration booklet is available at the Counseling Center and Career Services.

Identification and Reporting of Child Abuse and Maltreatment

All candidates seeking teacher certification must complete a minimum of two clock hours of instruction regarding the identification and reporting of child abuse and maltreatment. This degree and certification requirement can be met by taking designated workshops on child abuse at SUNY Cortland, and completion of the workshop will appear on the transcript. This State Education Department mandate can also be met by completing a designated workshop through another New York State Education Department approved provider.

School Violence Prevention Training

Effective February 2, 2001, all candidates seeking teacher certification must complete a minimum of two clock hours of instruction regarding school violence prevention training. This degree and certification requirement can be met by taking designated workshops on school violence prevention training at SUNY Cortland. This requirement is mandated as part of the NYS Save Legislation.

The Child Abuse Identification and School Violence Prevention and Intervention (SAVE) workshops must be completed prior to graduation. Workshop dates may be accessed at the www.cortland.edu/NCATE or www.cortland.edu/cee Web sites.

Fingerprinting

Effective July 1, 2001, all candidates, certified and non-certified, who wish to work in schools in New York State will be subject to fingerprinting regulations and background check prior to employment. Contact the Career Services Office for additional information and a fingerprinting packet.

Foreign Language Requirement

All candidates making application for an initial New York State certificate in early childhood, childhood, special education or adolescence education programs are required to demonstrate foreign language proficiency by successfully completing the second semester (102) of a college-level foreign language sequence or the equivalent.

The foreign language requirement can be met by:

- Successfully completing the second semester (102) of a college-level foreign language sequence; *or*
- Earning CLEP or AP credits through the 102 level; *or*
- Confirming proficiency equivalent to successful completion of the second semester (102) of a college foreign language sequence, through a testing program approved by the International Communications and Culture Department.

Completion of All Degree and Certification Requirements Prior to Graduation

The graduate degree may not be posted nor an official transcript produced without the completion of the relevant teacher certification requirements for the applicable graduate degree program.

Teaching Certificates after December 2003

After December 2003, the Initial Certificate for teaching will be issued to candidates who complete the requirements of a teacher education program leading to the initial teaching certificate.

In addition to completing program requirements, the applicant for an Initial Certificate must successfully pass three New York State Teacher Certification Examinations (NYSTCE): Liberal Arts and Sciences Test (LAST); Assessment of Teaching Skills-Written (ATS-W); and Content Specialty Test (CST.) Consult your department for additional certification changes after December 2003.

After December 2003, the Professional Certificate will be issued to candidates who complete the requirements of a graduate-level teacher education program. Candidates will have three years to complete the masters degree leading to the Professional Certificate. Consult your department for additional certification changes after December 2003.

Field Experience in Teaching

All teacher education candidates seeking the Initial Certificate are required to successfully complete 100 hours of field experience in K-12 schools as part of their professional preparation program prior to student teaching. Arrangements for housing and transportation during all field experiences and student teaching are the responsibility of the candidate.

Job Placement Availability

The New York State Education Department requires publication of statistics regarding labor market and job availability for teachers. Information may be accessed by visiting the following Web sites: www.aee.org for national statistics, and www.highered.nysed.gov/tcert/sup&dem.html for statewide statistics. In addition, contact specific departments for information regarding Cortland graduates.

Programs of Study, Program and HEGIS Codes

All majors offered by SUNY Cortland are listed on the inventory of Registered Degree and Certification Programs maintained by the New York State Education Department. The number assigned to each major is referred to as the "HEGIS" Code (Higher Education General Information Survey Code). This chart may not represent all concentrations offered at SUNY Cortland. For more information, contact: New York State Education Department, Office of Higher Education and the Professions, Cultural Education Center, Room 5B28, Albany, N.Y. 12230.

Degrees awarded: Certificate of Advanced Study (C.A.S.), Master of Arts (M.A.), Master of Arts in Teaching (M.A.T.), Master of Science (M.S.), Master of Science in Teaching (M.S.T.), and Master of Science in Education (M.S.Ed.).

Graduate Program Codes and HEGIS Codes

PROGRAM	DEGREE	MAJOR CODE	HEGIS CODE
CERTIFICATES OF ADVANCED STUDY			
American Civilization and Culture	C.A.S.	ACC	0313
School Administration Supervisor	C.A.S.	SAS	0828
School Business Administrator	C.A.S.	SBA	0827
GRADUATE PROGRAMS			
BIOLOGY			
Adolescence Education (7-12)	M.A.T.	ABI	0401.01
Secondary Education (7-12)	M.A.T.	SBI	0404.01
Adolescence Education (7-12)	M.S.Ed.	ABI	0404.01
w/ Middle Childhood extension (5-6)	M.S.Ed.	ABI_MCHD	0404.01
CHEMISTRY			
Adolescence Education (7-12)	M.A.T.	ACH	1905.01
Secondary Education (7-12)	M.A.T.	SCH	1905.01
Adolescence Education (7-12)	M.S.Ed.	ACH	1905.01
w/ Middle Childhood extension (5-6)	M.S.Ed.	ACH_MCHD	1905.01
EARTH SCIENCE			
Adolescence Education (7-12)	M.A.T.	AES	1917.01
Secondary Education (7-12)	M.A.T.	SGE	1917.01
Adolescence Education (7-12)	M.S.Ed.	AES	1917.01
w/ Middle Childhood extension (5-6)	M.S.Ed.	AES_MCHD	1917.01
EDUCATION			
Childhood Education			
Childhood Education (1-6)	M.S.T.	CHD	0802
concentration: Math and Science	M.S.Ed.	CED	0802
concentration: Social Studies		CED_MS	
concentration: Technology		CED_SS	
		CED_TECH	
Elementary Education			
concentration: Curriculum and Instruction	M.S.Ed.	EED	0802
concentration: Foundations of Education		EED/CUR	
concentration: Mathematics		EED/FND	
concentration: Reading Teacher		EEDMAT	
concentration: Science		EED/RDG	
Elementary and Early Secondary English	M.S.Ed.	EED/SCI	
Elementary and Early Secondary Science	M.S.Ed.	EEN	0804.01
Elementary and Early Secondary Social Studies	M.S.Ed.	ESM	0804.03
Literacy Education	M.S.Ed.	ESS	0804.02
Birth-Grade 6	M.S.Ed.	LED	0830
Grades 5-12		LED_B-6	
		LED_5-12	
Reading Teacher K-12	M.S.Ed.	RDG	0830
Teaching Students w/ Disabilities	M.S.Ed.	TSD	0808
Annotation: Severe and Multiple Disabilities		TSD_SEV	
ENGLISH			
Adolescence Education (7-12)	M.A.	ENG	1501
Secondary Education (7-12)	M.A.T.	AEE	1501.01
Adolescence Education (7-12)	M.A.T.	SEN	1501.01
w/ Middle Childhood extension (5-6)	M.S.Ed.	AEE	1501.01
	M.S.Ed.	AEE_MCHD	1501.01

Graduate Program Codes and HEGIS Codes

PROGRAM	DEGREE	MAJOR CODE	HEGIS CODE
FRENCH Secondary Education (7-12)	M.S.Ed.	SFR	1102.01
HEALTH Certification in Health Education	M.S.Ed.	HEC	0837
Certification in Health Education	M.S.Ed.	HED	0837
Health Education K-12 (non-certification)	M.S.Ed.	HEN	0837
Health Education concentration: Certification	M.S.T.	HEA	0837
concentration: Non-certification		HEA_CRT	
concentration: Physical Education Certification		HEA_NCRT	
		HEA_PCRT	
HISTORY	M.A.	HIS	2205
MATHEMATICS Adolescence Education. (7-12)	M.A.T.	AEM	1701.01
Secondary Education (7-12)	M.A.T.	SMA	1701.01
Adolescence Education (7-12)	M.S.Ed.	AEM	1701.01
w/ Middle Childhood extension. (5-6)	M.S.Ed.	AEM_MCHD	1701.01
PHYSICAL EDUCATION Certification in Physical Education	M.S.Ed.	PEC	0835
concentration: Adapted Physical Education		PEC_ADPE	
concentration: Curriculum and Instruction		PEC_CURR	
Physical Education K-12	M.S.Ed.	PED	0835
PHYSICS Adolescence Education (7-12)	M.A.T.	APH	1902.01
Secondary Education: Physics	M.A.T.	SPH	1902.01
Adolescence Education (7-12)	M.S.Ed.	APH	1902.01
w/ Middle Childhood extension (5-6)	M.S.Ed.	APH_MCHD	1902.01
PHYSICS AND MATHEMATICS Adolescence Education (7-12)	M.S.Ed.	APM	1799
w/ Middle Childhood extension (5-6)	M.S.Ed.	APM_MCHD	1799
Secondary Education	M.S.Ed.	SPM	1799
RECREATION EDUCATION Certification: Recreation Education	M.S.Ed.	RED or RE	0835.01
concentration: Environmental and Outdoor Education		RED/EOE	
concentration: Management of Leisure Services		RED/MGLS	
concentration: Therapeutic Recreation		RED/TR	
Recreation concentration: Environmental and Outdoor Education	M.S.	REC	2103
concentration: Management of Leisure Services		REC/EOE	
concentration: Therapeutic Recreation		REC/MGLS	
		REC/TR	
SECOND LANGUAGE EDUCATION Certification: Second Language Education	M.S.Ed.	SLED	1508
concentration: Spanish		SLED_SPA	
concentration: French		SLED_FRE	
concentration: English as Second Language		SLED_ESL	
extension: Bilingual Extension		BIL	
SOCIAL STUDIES Adolescence Education (7-12)	M.S.Ed.	SSA	2201.01
Secondary Education	M.S.Ed.	SSS	2201.01

Adolescence Education

SCHOOL

Arts and Sciences

SUNY Cortland offers 15 graduate certification programs that prepare candidates to teach in grades 7-12. Adolescence education programs are available in the following areas of study, leading to a Master of Arts in Teaching (M.A.T.) or a Master of Science in Education (M.S.Ed.):

- Adolescence Education: Biology (7-12) — M.A.T.
- Adolescence Education: Biology (7-12) — M.S.Ed. with Middle Childhood Extension (5-6)
- Adolescence Education: Chemistry (7-12) — M.A.T.
- Adolescence Education: Chemistry (7-12) — M.S.Ed. with Middle Childhood Extension (5-6)
- Adolescence Education: Earth Science (7-12) — M.A.T.
- Adolescence Education: Earth Science (7-12) — M.S.Ed. with Middle Childhood Extension (5-6)
- Adolescence Education: English (7-12) — M.A.T.
- Adolescence Education: English (7-12) — M.S.Ed. with Middle Childhood Extension (5-6)

- Adolescence Education: Language other than English — French (7-12) — M.S.Ed.
- Adolescence Education: Mathematics (7-12) — M.A.T.
- Adolescence Education: Mathematics (7-12) — M.S.Ed. with Middle Childhood Extension (5-6)
- Adolescence Education: Physics (7-12) — M.A.T.
- Adolescence Education: Physics (7-12) — M.S.Ed. with Middle Childhood Extension (5-6)
- Adolescence Education: Physics and Mathematics (7-12) — M.S.Ed. with Middle Childhood Extension (5-6)
- Adolescence Education: Social Studies (7-12) — M.S.Ed.

All adolescence education programs are housed in the School of Arts and Sciences, in the department area of content. For specific program requirements, consult the appropriate department pages. Additional requirements for New York State teacher certification are found on page 248 of this catalog.

Adolescence Education

COURSE DESCRIPTIONS

AED 540: Technologies in the Adolescence Mathematics Classroom (M) Graphing calculators as teaching tools. The Internet as a source for mathematical software packages to promote active learning. A number of software packages dealing with a variety of mathematical topics including graphing functions, geometry and calculus will be investigated. (3 cr. hr.)

AED 541: Teaching Literature and Critical Literacy (F) This course integrates the teaching of literature and critical literacy. Lesson planning, instructional strategies, and teaching with English Language Arts standards are emphasized, as are theory and methods for helping students apply critical reading and writing skills to a range of genres and levels of interpretation. Prerequisite: 3.0 grade point average in the major. (3 cr. hr.)

AED 585: Participant/Observer Experience (A) This course is designed to help candidates accumulate the additional 40 hours of pre-service fieldwork at their first student teaching placement. Students, acting as participant/observers for the eight days prior to their first practicum, will develop the reflective disposition needed to make wise instructional decisions. Prerequisites: ENG 502, EDU 541, EDU 662. (1 cr. hr.)

AED 586: Practicum I: Student Teaching in the Middle School (B) Supervised student teaching in a middle school for students enrolled in the Master of Arts in Teaching in Adolescence Education: English (7-12). (7 cr. hr.)

AED 587: Practicum II: Student Teaching in the Secondary School (B) Supervised student teaching in a high school for students enrolled in the Master of Arts in Teaching in Adolescence Education: English (7-12). (7 cr. hr.)

AED 601: Teaching Adolescence Mathematics (C) Teaching and learning in the adolescence mathematics classroom. Concepts in adolescence mathematics, state and national standards, classroom management and motivation, teaching techniques and strategies for diverse learners. Prerequisite: EDU 600 (3 cr. hr.)

AED 626: Mathematics Methods for Middle School Teachers (O) Content and methods for teaching mathematics topics at the middle school level such as number concepts, computation, estimation, functions, algebra, statistics, probability, geometry, and measurement. Prerequisite: Consent of department. (3 cr. hr.)

AED 642: Methods I: Teaching the Sciences in the Middle and Secondary Schools (S) This course begins with an examination of the history and foundations of education, with an emphasis on the history of science education. It then examines disciplinary models and strategies for classroom management. Students will develop tools for measurement and evaluation of performance and achievement for students with diverse abilities and interests. Students will participate in short and long-range lesson planning and curriculum development. Federal and state laws, policies and procedures for dealing with students with disabilities will be examined. Strategies for collaborating with administrators, faculty/staff, parents/guardians, and community members will be discussed. Includes 25 hours of field experience in middle and secondary schools. Prerequisites: PSY 532 and AED 600. (3 cr. hr.)

AED 644: Seminar for Field Practicum

(A) Seminar for field experiences in Adolescence Education: Science (7-12). Biweekly meetings to discuss observations made in middle and secondary school classrooms. Twenty-five hours of field experience required. Prerequisite: AED 600. (1 cr. hr.)

AED 645: Student Teaching: Adolescence Education—Science

(A) Full-time supervised student teaching in two public school placements: one, eight-week, placement at the seventh or eighth grade level and one, eight-week, placement at the ninth, tenth, eleventh, or twelfth grade level. A discipline-specific student teaching seminar is held on campus once during the semester. Prerequisites: PSY 532; AED 643; and AED 644. See major department for eligibility criteria. Satisfactory (S), Unsatisfactory (U) grades are assigned. (14 cr. hr.)

AED 646: Seminar in the Teaching of Science in the Middle and Secondary Schools

(S, M) Significant curriculum patterns, practices, research; investigations based on individual needs, interests. (3 cr. hr.)

AED 660: Participant-Observer Experience: Language Development

(F) A 30-hour field experience supervised by the course instructor. Students must be concurrently enrolled in AED 662. (1 cr. hr.)

AED 662: Language Development in Adolescents

(F) Combines models of first-language acquisition, the structure of the English language, cooperative learning, sentence combining, and accelerated learning to develop an overall model for enhancing language development of all adolescents, regardless of dialect and socioeconomic standing. M.A.T. students must be concurrently enrolled in AED 660. Prerequisite: Graduate status. (3 cr. hr.)

AED 663: Seminar in Research in the Teaching of English

(S) This study of empirical investigations of the teaching of English will culminate in students writing a review of research in a particular aspect of teaching English or conducting an original research study. Prerequisites: Completion of 12 hours of graduate work in English and 12 in Education. (3 cr. hr.)

AED 692: Field Experiences in Mathematics Teaching

(A) Seventy-five hours of directed observation of junior or senior high mathematics teachers and other school personnel. H, S, U grades are assigned. Prerequisites: MAT 501, 502, AED 540, 601, EDU 549, 661, 671, HLH 510, and PSY 501 or PSY 533. (2 cr. hr.)

AED 693: Student Teaching – Adolescence Mathematics I

(A) Five weeks of full time student teaching supervised by College faculty. H, S, U grades are assigned. Prerequisite: AED 692. (4 cr. hr.)

AED 694: Student Teaching – Adolescence Mathematics II

(A) Seven weeks of full time student teaching supervised by College faculty. H, S, U grades are assigned. Prerequisite: AED 693. (6 cr. hr.)

American Civilization and Culture

Dean of Arts and Sciences Office
(607) 753-4312

Note: This program is housed in the School of Arts and Sciences and is for international students only.

ADMISSION REQUIREMENTS

Applicants for enrollment in the program leading to the Certificate of Advanced Study (C.A.S.) in American Civilization and Culture should present the following:

1. B.A., B.S. or equivalent degree offered by a foreign university.
2. Demonstrated command of written and spoken English as verified by the appropriate scores on the TOEFL Examination.

PROGRAM REQUIREMENTS

1. A total of 18 hours of graduate course work.
2. Twelve hours of an approved interdisciplinary concentration with a demonstrable coherence and direction such as:
 - American History or Government
 - American Social and Economic History
 - American and English Literature
 - American Literature
 - Foundations of American Education
 - American Institutions

3. Six hours of graduate course electives in American civilization and culture to be selected in consultation with the advisor.
4. At least six credit hours of course work at the 600-level.
5. A minimum B (3.0) grade point average in courses taken to complete the program, with no grade below a C- counting toward certificate requirements.
6. Additional requirements: Students must meet any specific prerequisites for any course they wish to take, or obtain special permission of the instructor and the department chair concerned. Special permission may require a diagnostic examination.

The specific course components of each student's program of study must be approved by the faculty advisor and the dean of the student's school.

Education

DEPARTMENT

Van Hoesen Hall, Room B-134
(607) 753-2449
E-mail: conradb@cortland.edu
www.education.cortland.edu

SCHOOL

Professional Studies

FACULTY

See page 97 for a complete listing.

PROGRAMS OFFERED

Master of Science in Teaching: Childhood Education
Master of Science in Education: Childhood Education
Master of Science in Education: Literacy Education
Certificate of Advanced Study: Educational Administration

Master of Science in Teaching Childhood Education (1–6) [CHD]

CAREER POTENTIAL

- Elementary school teacher

ADMISSION REQUIREMENTS

1. An interview with M.S.T. program coordinator
2. B.A. or B. S. in a liberal arts area from an accredited college
3. Approved concentration of 36 hours in a liberal arts area
4. Minimum of two undergraduate courses in each of the following areas: English, social studies (history, geography, economics, political science, sociology), mathematics and science, as well as general preparation in the following areas: physical education, fine arts and career and occupational studies
5. Foreign Language: Successful completion of one year of college-level study of a language other than English or the equivalent. See page 248 of this catalog for alternate ways of meeting this requirement
6. Child psychology course
7. Basic competency in technology (computing) as determined by the student's records and experiences
8. Strong academic record, demonstrated by a minimum undergraduate grade point average of 3.0 or better, GRE scores, or other standard test scores, indicating the ability to do graduate-level work
9. Letter of introduction (writing sample) that includes a self-description, background of experiences, and goals
10. Resume
11. Application to the SUNY Cortland Teacher Education Program

GRADUATION REQUIREMENTS

1. Complete all required courses in the M.S.T. program, including the master's project
2. Overall grade point average of at least 3.0 in the M.S.T. program
3. Additional New York State certification requirements fulfilled:
 - a. Health education course that fulfills state mandate (e.g. HLH 265)
 - b. Passing score on the Liberal Arts and Sciences Test (LAST)
 - c. Passing score on the Assessment of Teaching Skills — Written
 - d. Child Abuse Recognition and Reporting Workshop
 - e. School Violence Workshop

PROGRAM DESCRIPTION

The M.S.T. is designed to begin in the spring and continue through the following spring for a total of 51 credit hours, including both summer sessions. (If a group begins in the fall, the sequence below would be altered in that semesters B and C would be reversed.)

This is a full-time program that requires field experiences in schools each semester. On completion of the courses, college requirements, and state requirements detailed below, graduates will receive a master's degree and New York State Initial Certification.

COURSE SEQUENCE

A. First Semester

12 credit hours

Observation (30 clock hours)

- EDU 510: Inquiry into Teaching, Technology, and Research
- EDU 511: Teaching Literacy in the Primary Grades
- EDU 512: Teaching Elementary School Mathematics
- EDU 513: Teaching Elementary School Science

B. Summer Sessions I and II

12 credit hours

I. EDU 514: Teaching Elementary Social Studies
EDU Elective

II. Tutorial (25 clock hours) 12 credit hours
EDU 516: Teaching Literacy in the Intermediate Grades
EDU 650: Educational Assessment

C. Third Semester

12 credit hours

Practicum (100 clock hours)

- EDU 656: Classroom Applications of Child Development
- EDU 657: Elementary School Practicum and Research Seminar
- EDU 658: Classroom Organization and Management: Theory and Practice
- EDU 670: Foundations of Education

D. Fourth Semester

15 credit hours

Teaching (Two six-week, full-time teaching at two levels)

- EDU 690: Student Teaching I
- EDU 691: Student Teaching II
- EDU 698: Student Teaching/Culminating Research Project Seminar

TOTAL CREDIT HOURS REQUIRED: 51

Master of Science in Education Childhood Education [CED]

The program is intended for students who have a bachelor's degree in elementary education. It requires a minimum of 33 credit hours of approved graduate course work including culminating experience.

CAREER POTENTIAL

- Elementary school teacher
- Curriculum specialist
- Community college/college instructor

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program as stated in this catalog, the applicant for enrollment in the program leading to a Master of Science in Education in Childhood Education (1-6) should present the following:

1. Official transcripts documenting a bachelor's degree from an accredited college or university
2. Documentation of an initial/provisional certificate (or a certificate of qualification for initial or provisional certification) in childhood education/elementary education issued by the New York State Education Department
3. An overall undergraduate grade point average of at least 2.8
4. Two recommendation checklists (forms included in the application packet)
5. A typewritten statement demonstrating commitment to and interest in childhood education as well as ability to write clearly and well (question/rubric included in the application packet)
 - What are your reasons for wanting to work with students in elementary school?
 - What are your reasons for selecting SUNY Cortland for graduate studies, and specifically for M.S.Ed. in Childhood Education?
 - What are your long-term goals and how do you see this program supporting you in achieving those goals?
 - What other information do you deem relevant for reviewers to know?

Students should matriculate before beginning course work and must establish candidacy for the degree between their sixth and 15th hour of course work.

According to College policy, no more than six graduate credit hours may be transferred from another college; only course work completed in the five years prior to completion of the graduate program may be included in the degree program.

ADDITIONAL REQUIREMENTS

Candidates for the degree must meet any additional undergraduate or graduate requirements for the award of the degree established by the Education Department. Such additional requirements must be ascertained by the student in consultation with an Education Department advisor.

Specific information regarding requirements (state examinations, identification and reporting of child abuse and maltreatment, alcohol and drug abuse education, school violence prevention training, and foreign language requirements) for New York State teaching certification can be found on page 248 of this catalog.

More detailed information is found in the Graduate Advisement Manual, available at the Education Department office or on the department Web site.

- A. Required Initial Courses: 6 credit hours
 - EDU 671: Issues in Foundations of Education
 - EDU 651: Understanding and Conducting Educational Research
 - Prerequisite: Student Teaching
- B. Required Core Courses: 15 credit hours
 - EDU 660: Curriculum Analysis in American Education
 - EDU 551: e-Learning and the American Classroom
 - EDU 539: Reading and Writing Across the Curriculum
 - EDU 524: Democracy and Social Education
 - EDU 522: Readings, Research and Teaching Innovations in the Mathematics and Sciences

C. Required Specialty Strands: 12 credit hours
Each student in the program must choose ONE specialty strand and take the courses in that strand.

SOCIAL STUDIES STRAND

One arts and sciences graduate elective at 500-600 level
EDU 640: Conflict and Controversy in Social Education

Prerequisite: EDU 524, may be taken concurrently
EDU 647: Social Education in the Digital Age

Prerequisite: EDU 524, may be taken concurrently
EDU 652: Master's Project or EDU 699: Master's Thesis
Prerequisite: Completion of 30 hours of course work

MATH AND SCIENCE STRAND

One arts and sciences graduate elective at 500-600 level
EDU 610: Advanced Topics in Mathematics Education

Prerequisite: EDU 522, may be taken concurrently
EDU 648: Seminar in Elementary Science Education

Prerequisite: EDU 523, may be taken concurrently
EDU 652: Master's Project or EDU 699: Master's Thesis
Prerequisite: Completion of 30 hours of course work

TECHNOLOGY SPECIALIST STRAND

One arts and sciences graduate elective at 500-600 level (3 cr. hr.)
GRY 520: Maps in the Classroom

EDU 630: New Media in the Classroom

Prerequisite: EDU 551

EDU 652: Master's Project or EDU 699: Master's Thesis
Prerequisite: Completion of 30 hours of course work

TOTAL CREDIT HOURS REQUIRED: 33

Master of Science in Education **Literacy Education [LED]**

This program is intended for students who have a bachelor's degree in teacher education. It requires a minimum of 33 hours of approved graduate course work including a culminating experience.

CAREER POTENTIAL

- Literacy Specialist, Birth-Grade 6
- Literacy Specialist, Grades 5-12

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program as stated in this catalog, the applicant for enrollment in the program leading to a M.S.Ed. in Literacy Education should present the following:

1. Official transcripts documenting a bachelor's degree from an accredited college or university
2. Documentation of an initial/provisional certificate (or a certificate of qualification for initial or provisional certification) in early childhood, childhood, elementary education, middle school education, adolescence education or secondary education, and/or special education issued by the New York State Education Department
3. An overall undergraduate grade point average of at least 2.8
4. Two recommendation checklists (forms available from the Graduate Studies Office Web site)
5. A typewritten statement demonstrating commitment to and interest in literacy education as well as an ability to write clearly and well (question/rubric available from the Graduate Studies Office Web site)

Before beginning course work, students must select from one of two tracks:

Track 1: Study leading to the initial and professional certificate in the Teaching of Literacy Birth to Grade 6

Track 2: Study leading to the initial and professional certificate in the Teaching of Literacy Grades 5-12

Students who may wish to apply for certification in both areas, may become eligible to do so by completing additional course work.

Students should matriculate (be accepted and enrolled in the program) before beginning course work and must establish candidacy for the degree between their sixth and 15th hour of course work.

According to College policy, no more than six graduate credit hours may be transferred from another college. In addition, only course work completed in five years prior to completion of the graduate program may be included in the degree program.

ADDITIONAL REQUIREMENTS

Candidates for the degree must meet any additional undergraduate and graduate requirements for the award of the degree established by the Education Department. Such additional requirements must be ascertained by the student in consultation with the department's chairs.

Specific information regarding requirements (state examinations, identification and reporting of child abuse and maltreatment, alcohol and drug abuse education, fingerprinting, violence prevention, and foreign language requirements) for New York State teaching certification can be found on page 246 of this catalog.

More detailed information is found in the *Graduate Advisement Manual* available in the Education Office. For a copy, call (607) 753-2449.

A. Required courses for Track 1: Study leading to the certificate in the Teaching of Literacy B-Grade 6

EDU 528: Language and Literacy Development

EDU 580: Literacy and Society

EDU 651: Understanding and Conducting Educational Research

EDU 540: Current Practices in Literacy Assessment and Instruction B-Grade 6

EDU 628: Children's Literature in the Curriculum

EDU 680: Assessment and Instruction of Learners Experiencing Literacy Difficulties B-Grade 6

EDU 693: The Literacy Practicum and Seminar

EDU 669: The Literacy Specialist and The Literacy Program

EDU 653: The Masters' Project in Literacy Education *or*

EDU 699: The Masters' Thesis

One from the following:

SPE 510: Teaching the Special Education Learner in the General Education Classroom

EDU 525: Teaching the Inner City Child

WST 552: Gender Issues in Education

TOTAL CREDIT HOURS REQUIRED: 33-36

B. Required courses for Track 2: Study leading to the certificate in the Teaching of Literacy Grades 5-12

EDU 528: Language and Literacy Development

EDU 580: Literacy and Society

EDU 651: Understanding and Conducting Educational Research

EDU 550: Current Practices in Literacy Assessment and Instruction Grades 5-12

EDU 649: Young Adult Literature

EDU 681: Assessment and Instruction of Learners

Experiencing Literacy Difficulties Grades 5-12

EDU 693: The Literacy Practicum and Seminar

EDU 669: The Literacy Specialist and The Literacy Program

EDU 653: The Masters' Project in Literacy Education *or*

EDU 699: The Masters' Thesis

One from the following:

SPE 510: Teaching the Special Education Learner in the General Education Classroom

EDU 525: Teaching the Inner City Child

WST 552: Gender Issues in Education

TOTAL CREDIT HOURS REQUIRED: 33-36

Master of Science in Education Teaching Students with Disabilities [TSD]

This program is intended for students who have a bachelor's degree in childhood/elementary education. It requires a minimum of 36 credit hours of approved graduate course work including student teaching and a culminating experience. Students may elect to take an additional six credit hours in approved course work to receive an annotation in teaching of students with severe and/or multiple disabilities.

CAREER POTENTIAL

- Special Education Teacher, Grade 1-6
- Childhood/Elementary Education Teacher, Grade 1-6
- Resource Room Teacher, Grade 1-6
- Committee on Special Education (CSE) Chair
- Community College/College Instructor
- Developmental Disabilities Specialist

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in the College Catalog, the applicant for enrollment in the program leading to a Master of Science in Teaching Students with Disabilities (Grades 1-6) should present the following:

1. Official transcripts documenting a B.S. or B.A. in childhood (elementary) education from an accredited college or university.
2. New York State Initial Certification in Childhood Education – pending or awarded.
3. A minimum undergraduate grade point average of 2.8 (Note, if the applicant graduated more than 10 years prior to application, he/she may be required to provide additional evidence of more recent academic competence (e.g. continuing education courses, CEUs, or other appropriate documentation).
4. Submission of a personal statement indicating
 - reasons for wanting to work with students with disabilities (including personal experiences which have influenced this decision)
 - reasons for selecting SUNY Cortland for graduate studies and this program specifically
 - discussion of long term professional goals and view of how this program will support candidate in achieving these
 - any other information deemed relevant by the candidate.
5. Three letters of reference detailing the applicant's ability to meet the rigors of graduate study, and the applicant's commitment to, and competence in, working with students with disabilities.
6. An interview with the TSD program coordinator or designee.

ADDITIONAL REQUIREMENTS

Candidates for the degree must meet any additional undergraduate or graduate requirements for the award of the degree established by the Education Department. Such additional requirements must be ascertained by the student in consultation with the Education Department.

Specific information regarding requirements (state examinations, identification and reporting of child abuse and maltreatment, alcohol and drug abuse education, school violence prevention training, and foreign language requirements) for New York State teaching certification can be found on page 248 of this catalog.

More detailed information is found in the Graduate Advisement Manual, available at the Education Department office. For a copy, call (607)753-2449.

A. Required Courses: 16 credit hours

- EDU 671: Foundations in Education
- EDU 651: Research Methods
- EDU 652: Masters project
- EDU 680: Assessment and Instruction of Learners Experiencing Literacy Difficulties
- EDA 683: Administration of Special Education

B. Required Core Courses: 20 credit hours

- SPE 510: Teaching the Special Education Learner in the General Classroom
- SPE 610: Advanced Assessment, Curriculum and Instruction of Students with Disabilities
- SPE 620: Discipline and Social Skill Development for Students with Disabilities
- SPE 630: Students with Disabilities in Context
- SPE 690: Student Teaching (one quarter)
- SPE 691: Professional Seminar

Total credit hours: 36

C. Annotation Courses: 6 credit hours

- Annotation in Severe/Multiple Disabilities: 6 credits
- SPE 640: Teaching Students with Severe/Multiple Disabilities (3 cr. hr.)
- SPE 650: Autism Spectrum Disorders

ADDITIONAL INFORMATION

Applications will only be accepted for fall admission only. Applications must be received by May 1 for fall admission. Advisement will be provided by Dr. Janet Duncan and/or Dr. Sue Lehr.

Educational Administration

The Certificate of Advanced Study (C.A.S.) program prepares students to become school administrators. The program requires 30 to 36 credit hours depending on the students' areas of interest including an administrative internship. Students and their advisors develop programs to fit the students' career goals.

CAREER POTENTIAL

- Subject and content area supervisors
- Building administrators
- Directors of athletics and physical education
- Business officials

MISSION STATEMENT

The SUNY Cortland Educational Administration Program prepares educational leaders by integrating theory and practice to develop schools and other learning communities effectively.

A Certificate of Advanced Study (C.A.S.) will be given to students who have been accepted and satisfactorily completed all program requirements. Candidates for the Educational Administration Program must hold an earned master's degree.

Candidates for school administration supervisor (SAS) must hold a permanent teaching certificate and complete a total of 60 semester hours of approved graduate study above the bachelor's degree. Candidates for the School Business Administrator (SBA) must complete 66 credit hours of approved graduate study (a maximum of 30 credits may be transferred in from previously earned master's degrees).

The SAS Certificate enables holder of the certificate to qualify for positions such as "principal, housemaster, supervisor, department chair, assistant principal, coordinator, unit head and any other person serving more than 25 percent – 10 periods a week – of his or her assignment in any administrative and/or supervisory position as described in New York State Commissioner's Regulations, Section 84.4/3b (4/30/78).

The SBA Certificate enables holders to qualify for positions having professional responsibility for the business operation of a school district.

ADMINISTRATIVE INTERNSHIP

All students must complete the requirements for an administrative internship under the supervision of a practicing school administrator and a representative of SUNY Cortland. Several options for satisfying the internship requirement are available and must be approved by the program coordinator.

The internship for the SBA must be conducted in a business office environment. Students must complete at least 21 hours of course work before beginning the internship experience. At least five of the core course must be completed with the 21 hours.

Advisement is available from the program director, handouts, and the catalog available in the Education Department office. For more information, call (607) 753-5684.

Certificate of Advanced Study School Administrator Supervisor [SAS]

A. Required Courses: 12 credit hours

- EDA 657: Foundations of Education Administration
- EDA 615: Education Law
- EDA 655: Administration of School Personnel
- EDA 613: School Business Management

B. Required Courses in Interest Area: 6 credit hours

- Building Administrator*
- EDA 616: Administration of School Curriculum
- EDA 678: Principles of Supervision
- Director of Physical Education*
- EDA 678: Principles of Supervision
- EDA 606: Seminar in Athletic Directing and Physical Education
- Management Services Administrator*
- EDA 656: Public School Finance
- EDA 685: Facilities, Planning, Design, Maintenance and Utilization of Public Buildings

C. Elective Courses: 6-9 credit hours

(EDA electives to fulfill program requirements)

D. Administrative Internship: 3-6 credit hours

TOTAL CREDIT HOURS REQUIRED: 30

Certificate of Advanced Study School Business Administrator [SBA]

- A. Required Courses: 24 credit hours
 EDA 657: Foundations of Education Administration
 EDA 615: Education Law
 EDA 655: Administration of School Personnel
 EDA 656: Public School Finance
 EDA 613: School Business Management
 EDA 685: Facility Planning, Design, Maintenance and Utilization of Public Buildings
 EDA 666: Curriculum Construction
 EDA 616: Administration of School Curriculum
- B. Elective Courses: 6-9 credit hours
 (EDA electives to fulfill program requirements)
- C. Administrative Internship: 3-6 credit hours

TOTAL CREDIT HOURS REQUIRED: 36

Education

GRADUATE COURSES

EDU 510: Inquiry into Teaching, Technology and Research
 (B) This course will introduce students to the field of teaching, which will include an exploration of teachers' practices, the structure of schools, student diversity, current initiatives in education in New York State, and other general areas related to education. The course will also examine the uses of technology in the public schools and ethical issues in using technology. Finally, students will learn how to be consumers and creators of research as preparation for the research they will be reading and/or conducting in future semesters. Classroom observations required throughout the semester. Prerequisite: Admission to the MST Program. (Undergraduates restricted.) (3 cr. hr.)

EDU 511: Teaching Literacy in the Primary Grades
 (B) The purpose of this course is to emphasize reading, writing, listening, and speaking at the primary school level. Students will learn to assess and instruct primary grade students through class and tutoring sessions. In addition, students will investigate philosophy of literacy, related research, students with special needs, multicultural issues, the use of technology in tutoring, and integrating content areas. Prerequisite: Admission to the MST Program. (Undergraduates restricted.) (3 cr. hr.)

EDU 512: Teaching Elementary School Mathematics
 (B) The goal of this course is to prepare pre-service teachers in the MST Program to teach mathematics to elementary school students in an effective, constructivist, and equitable manner. In class meetings, the instructor will use hands-on mathematics activities to model appropriate strategies for teaching mathematics in a student-centered classroom and to build pre-service teachers' understandings of mathematics. Inquiry teaching will be also modeled and expected in students' lesson plans. By completing class readings, course assignments, and observations of children in classrooms, students will develop a multitude of techniques and strategies for providing mathematics instruction to diverse learners. Prerequisite: Admission to the MST Program. (Undergraduates restricted.) (3 cr. hr.)

EDU 513: Teaching Elementary School Science
 (B) This course will provide hands-on activities that enable students to experience inquiry and learning science in a constructivist manner. Through reflection of these experiences and on structured interactions with children, students will participate in action research as they simultaneously engage in real life applications of the National Science Standards and the New York State Math/Science Technology Learning Standards. Prerequisite: Admission to the MST Program. (Undergraduates restricted.) (3 cr. hr.)

EDU 514: Teaching Elementary School Social Studies
 (B) This course investigates innovative and traditional approaches to teaching social studies concepts for children pre-K to 6. It emphasizes the objectives (including adaptation for diverse and exceptional children), curriculum content, materials and resources to engage in historical, social and citizenship understanding and activities at the appropriate developmental level. Experiences are provided to develop National Standards and State Learning Frameworks. Prerequisite: EDU 510, 511, 512 and 513. (3 cr. hr.)

EDU 515: Leisure Education
 (A) Introduction to philosophy, principles and techniques of leisure education. Implications for curriculum development in various settings and leisure service delivery systems. (3 cr. hr.) ■

EDU 516: Teaching Literacy in the Intermediate Grades
 (B) The purpose of this course is to emphasize reading, writing, listening, and speaking at the intermediate school level. Students will learn to assess and instruct an intermediate grade student through class and tutoring sessions. In addition, students will examine their philosophy of reading, related research, special needs, multicultural issues, the use of technology in tutoring, and integrating content areas. Prerequisite: EDU 514. (3 cr. hr.)

EDU 521: Elementary School Language Arts
 (O) Guiding children in written, oral communication. Prerequisite: Student teaching. (3 cr. hr.)

EDU 522: Readings, Research and Teaching Innovations in Mathematics and Science Education
 (A) This course will examine issues related to the teaching and integration of math, science and technology in elementary school classrooms. Students will examine theory and classroom-based research to construct an understanding of how these subject areas can be made accessible to all learners. (3 cr. hr.)

EDU 523: Elementary School Science
 (O) Objectives, content of science programs for children in pre-kindergarten through middle school. Planning pupil activities, utilizing teaching aids, materials. Prerequisite: Student teaching. (3 cr. hr.)

EDU 524: Democracy and Social Education
 (A) This course will be conducted through research-based and self-reflective-oriented inquiry. Students will analyze and define democracy and social education in the context of American public schools. Students will confront the antidemocratic forces of greed, individualism, and intolerance in today's society and be challenged to implement the study of social education with the goal of social justice. Students will be exposed to a theoretical and historical analysis of education and society. The course will also provide a practical analysis of classroom pedagogy and school organization. (3 cr. hr.)

EDU 525: Teaching the Inner City Child

(F) Challenge of educating urban youngsters; objectives, approaches, and procedures to meet this need. Includes disciplinary approaches, multicultural concerns, methods for involving students directly in their learning and background information for teaching multicultural social studies. Prerequisite: Graduate status; post student teaching undergraduates; African American Studies majors or minor in their senior year. (Also listed as AAS 581) (3 cr. hr.)

EDU 528: Language and Literacy Development

(A) Explores connections between overall language development and the specific development of print literacy. Studies theoretical perspectives of language development and examines how they are applied to learning environments. Prerequisite: Student teaching. (3 cr. hr.)

EDU 530: Seminar in Student-Centered Experiential Learning

(O) Open to elementary/secondary education majors. This is a student-centered, active participation course based primarily on John Dewey's philosophy. Requirements such as following the Core Practices which are based on Dewey's work and derived from Foxfire remain constant and are applied during each meeting of the course. Readings, discussions, and activities are designed to help students understand and employ the Core Practices and other concepts during the course. Prerequisites: Students teaching at the elementary, early secondary, or secondary level; 2.3 grade point average required. (3 cr. hr.)

EDU 531: Developing Creative Elementary School Experiences

(O) Research, objectives and procedures related to creativity in elementary school programs are examined. Emphasis is given to the development, implementation and evaluation of selected activities which integrate with various curriculum areas, enrich learning experiences and nurture the creative processes. Prerequisite: Consent of department. (3 cr. hr.)

EDU 532: Elementary School Mathematics II

(O) Extension of EDU 522, introduces additional math concepts including informal geometry, metrics, number patterns, probability. Prerequisite: Student teaching. (3 cr. hr.)

EDU 533: Introduction to Middle Childhood Education

(A) Content and methods for integration of curricula for language arts, mathematics, social studies, and science in grades 5-8. Development of interdisciplinary models and assessments aligned with New York State Learning Standards for each of the disciplines and implemented through thematic team teaching and collaborative student projects, appropriate for the intermediate level. Prerequisites: EDU 441 or EDU 442 or EDU 443, or SSS 301-02. (3 cr. hr.)

EDU 538: Discipline and Classroom Behavior in the Elementary School

(B) Identifying various behavior problems; alternative strategies for dealing with inappropriate behavior; discipline, classroom management as preventive measure; cognitive and affective approaches for resolving behavior problems. Not open to undergraduates having credit for EDU 478. Prerequisite: Student teaching. (3 cr. hr.)

EDU 539: Reading and Writing Across the Curriculum

(A) This course is intended to provide graduate students with a firm understanding of how reading and writing can be developed through content area subjects. (3 cr. hr.)

EDU 540: Current Practices in Literacy Assessment and Instruction of Learners from Birth-Grade 6

(A) This course will explore developmental reading concepts. Students will explore trends and research in the field of literacy. A field experience equal to one credit hour is required. Prerequisite which may be taken concurrently: EDU 528. (4 cr. hr.)

EDU 541: Teaching Literature in the Secondary School: Critical Theory and Classroom Practice

(F) Instructional strategies and curriculum planning for the teaching of literature in secondary school. Prerequisite: Graduate status. (3 cr. hr.)

EDU 544: Methods of Teaching Social Studies in Secondary Schools (O) (3 cr. hr.)**EDU 549: Reading in the Secondary School**

(A, M) Problems, learning theories related to reading and adolescence, causes of reading disabilities, diagnostic procedures, organizing developmental reading program. Prerequisite: Student teaching. (3 cr. hr.)

EDU 550: Current Practices in Literacy Assessment and Instruction of Learners in Grades 5-12

(A) Understanding the role of comprehension for all middle and secondary students will be emphasized through research, strategies, metacognition, and assessment. Topics include background, vocabulary, graphic organizers, purposes, questioning, study skills, and writing. Evaluating, selecting, and using textbooks will also be examined. A field experience equal to one credit hour is required. Prerequisite which may be taken concurrently: EDU 528. (4 cr. hr.)

EDU 551: e-Learning and the American Classroom

(A) This course is designed for practicing educators and teachers and will cover emerging educational technologies that are increasingly changing the way teachers perform their tasks. The emphasis of this course will be a hands-on approach to using new digital tools to enhance teaching, learning, and communication, not only within the classroom, but also to the larger contexts of schools, communities, and the world. Previous experience with personal computers is suggested but is not required. (3 cr. hr.)

EDU 552: Gender Issues in Education

(F) Seminar integrating recent scholarship on women and women's ways of knowing into a broader study of gender issues in education including socialization of men and women through education; socialization of women and men teachers and administrators and the costs and benefits of these structures for men and women. The course will focus upon application of these issues to policy and practice in education today. Prerequisites: Junior, senior or graduate level; education methods course. (Also listed as WST 552.) (3 cr. hr.)

EDU 559, 659: Special Topics in Education

Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

EDU 568: Environmental and Outdoor Education

(S) Development of program materials for various age, grade levels in public school. Policies, procedures, practices in supervision, administration of outdoor education. Prerequisite: Consent of instructor. (Also listed as REC 568.) (3 cr. hr.)

EDU 570: Character Education

(B) Character education is defined as helping students understand, care about, and act upon on widely shared ethical values such as respect, responsibility, honesty, fairness, caring, and civic virtue. Emphasis on a comprehensive approach that integrates character development into every phase of school life — including academics and behavior — and develops the classroom and school into caring communities that embody good character. Prerequisite: Student teaching. (3 cr. hr.)

EDU 580: Literacy and Society

(A) Explores connections between literacy and practices of the larger society. Readings cover a wide range of theories and perspectives. Introduces important theories in the field of literacy. Classic authors and works form the majority of course content. Prerequisite: Student teaching. (3 cr. hr.)

EDU 586: Practicum I: Student Teaching in the Middle School

(O) Supervised student teaching in a middle school for students enrolled in the Master of Arts in Teaching in Adolescence Education: English (7-12). (7 cr. hr.)

EDU 587: Practicum II: Student Teaching in the Secondary School

(O) Supervised student teaching in a high school for students enrolled in the Master of Arts in Teaching in Adolescence Education: English (7-12). (7 cr. hr.)

EDU 592: Student Teaching: Secondary Education — Mathematics

(A) Full-time supervised student teaching in an approved secondary school for students enrolled in the Master of Arts in Teaching program. Prerequisite: PSY 516; EDU 600, 601. (7 cr. hr.)

EDU 600: The Secondary School

(A) Secondary school programs and forces that have produced them. Criticisms and future of secondary schools. Selected topics in educational measurement and evaluation. (3 cr. hr.)

EDU 606: Seminar in Athletic Directing and Physical Education

(O) For directors of physical education and athletic directors in public schools. (Also listed as EDA 606.) (3 cr. hr.)

EDU 610: Advanced Topics in Mathematics Education

(B) This course explores the elementary school mathematics curriculum as well as issues involving teaching mathematics and assessing mathematics learning at grade levels K – 6. Throughout the semester, these issues are connected with the research in mathematics education, the NCTM standards, and New York State MST standards. Emphasis is placed on integrating mathematics with language arts, science, technology, and real life experiences. Prerequisite which may be taken concurrently: EDU 522. (3 cr. hr.)

EDU 611: Practicum in Corrective Elementary School Mathematics

(O) Practicum in diagnosis and remedial treatment. Prerequisite: EDU 610; may be taken concurrently with EDU 610. (3 cr. hr.)

EDU 620: Research and Evaluation in Early Childhood Education

(O) Uses of types of research; techniques for studying, evaluating teacher behavior, children's learning. Practicum required at beginning of concentration. (3 cr. hr.)

EDU 621: Learning Experiences for Young Children

(O) Concentrated, creative work in study, design and integration of learning experiences in specific subject, skill areas for infants through early primary years. Interdisciplinary workshops, practicum. (3-6 cr. hr.)

EDU 622: Programs and Theories in Early Childhood Education

(O) Model programs, underlying theories of learning and development. Overall curriculum design, continuity from preschool to early primary programs. Practicum, field trips to different types of programs. (3 cr. hr.)

EDU 623: Coping with Individual Differences in the Classroom

(O) Workshops in interpretive, instructional management competencies to deal effectively with educationally important differences in three- to eight-year-old children. Focus on disadvantaged child. Practicum. (2-4 cr. hr.)

EDU 627: Problems in the Teaching of Junior High School Mathematics

(O) Examination of junior high school mathematics curriculum; organizational patterns, materials, teaching techniques that develop mathematical competencies and understandings. Specific problem areas investigated. Prerequisite: Consent of instructor. (3 cr. hr.)

EDU 628: Children's Literature in the Curriculum

(A) The use of children's literature for helping children demonstrate an understanding and respect for cultural, linguistic, and ethnic diversity: stimulating interest, promoting reading growth, and increasing the motivation of learners to read widely and independently for knowledge, pleasure, personal growth, and social understandings. (3 cr. hr.)

EDU 630: New Media in the Classroom

(B) The development of new electronic tools for the creation of learning materials and environments has provided the potential for unlimited new ways of teaching. This course will provide a theoretical framework and hands-on experience with using these tools and creating learning materials. Previous experience with computers and digital media will prove helpful although not required. Prerequisite which may be taken concurrently: EDU 551. (3 cr. hr.)

EDU 631: Curriculum Construction in Health

(F, M) Based upon current theories of education applied in school health education. Opportunities to work on individual curriculum problems at any school level. (3 cr. hr.)

EDU 632: Seminar in the Teaching of Health Education

(S, C) Historical, philosophical development of health education; status, trends. Theory methodology utilized in instruction process for behavior development, change investigated. (3 cr. hr.)

EDU 637: Seminar in the Methods of Second Language Teaching

(O) Curriculum patterns, practices, research in secondary foreign languages. Prerequisites: One year of full-time teaching of foreign languages, provisional certification. (3 cr. hr.)

EDU 638: Seminar in the Teaching of Speech

(S) Significant curriculum patterns, practices, research; investigations based upon individual needs, interests. (3 cr. hr.)

EDU 639: Analysis and Correction of Reading Difficulties

(A, M) Methods, materials, research. Preparation of kit for use in analyzing difficulties. For teachers, reading consultants, supervisors. Prerequisite: EDU 529. (3 cr. hr.)

EDU 640: Conflict and Controversy in Social Education

(B) This course involves the systematic study of the theories and methods that deal with teaching social issues to diverse populations of elementary school students. The course will consider aspects of the history of social studies and theory and research in social education. The course will stress, among other things, the nature of controversial subject matter, the methods of teaching critical social-inquiry, and ways of constructing a learning community or milieu. Attention will also be directed at developing competencies in social studies-related learning strategies, such as problem solving, critical thinking and reading, awareness of current events, and participatory citizenship activities. Prerequisite which may be taken concurrently: EDU 524. (3 cr. hr.)

EDU 641: Seminar in Teaching Secondary English

(S) Significant curriculum patterns, practices, research; investigations based upon individual needs, interests. Not credited as basic methods course for certification. (3 cr. hr.)

EDU 642: Seminar in Teaching of Secondary Mathematics

(C) Significant curriculum patterns, practices, research; opportunities for projects, research. Not credited as basic methods course for certification. (3 cr. hr.)

EDU 644: Seminar in Teaching of Secondary Social Studies

(S, M) Selected problems in curriculum, methodology; research based upon individual needs, interests. Not credited as basic methods course for certification. Prerequisite: One year teaching experience and undergraduate course in secondary social studies. (3 cr. hr.)

EDU 646: Independent Study

(A) Independent research into problems in education under the guidance of a faculty member. Students are responsible to arrange for faculty sponsorship; sponsor will determine design of study. S, U grades are assigned. Consent of Education Department chair required. (1-3 cr. hr.)

EDU 647: Social Education in the Digital Age

(B) This course is designed to prepare graduate students in the social studies specialization strand to become informed consumers of social studies resources on the Internet. This course will also explore practical theory and research concerning teaching and learning social studies on the Internet while providing multiple experiences to use communication technology. Students will create an Internet resource guide for use in the social studies classroom. Prerequisite which may be taken concurrently: EDU 524. (3 cr. hr.)

EDU 648: Seminar in Elementary Science Education

(B) This course will review the literature in science education. Students will examine various science programs for children in grades pre-k through eight and assess their effectiveness in supporting national and state learning standards. Prerequisite which may be taken concurrently: EDU 523. (3 cr. hr.)

EDU 649: Young Adult Literature

(O) Investigations of literature written for young adults, grades 5-12 with emphasis placed on reader response theory. (3 cr. hr.)

EDU 650: Educational Assessment

(B) Measurement, evaluation of pupils, curriculum. Prerequisite: Student teaching. (Also listed as EDA 650.) (3 cr. hr.)

EDU 651: Understanding and Conducting Educational Research

(A) An initial course in the reading, analysis, and design of research in education, EDU 651 is intended to provide graduate students with basic understanding of text, information, and methodology to be applied throughout the master's program. Prerequisite: Student teaching. (3 cr. hr.)

EDU 652: Master's Project

(A) The Master's Project is a culminating experience in the master's of education programs, building on work begun in EDU 651 and resulting in extensive research and writing on a topic appropriate to a student's program, under direction of a project advisor. Candidates' projects demonstrate comprehensive understandings of the knowledge and practices of their selected field of study and evidence that they have met all college criteria for the master's degree and the New York State Education Department criteria for the initial or professional certification sought. S, U grades are assigned. Prerequisites: EDU 522, 524, 539, 551, 651, 660 and 671; completion of 30-hour master's program. (3 cr. hr.)

EDU 653: The Master's Project in Literacy Education

(A) The Master's Project is the culminating experience in the Literacy Education program and results in a Literacy Professional Portfolio. Through the portfolio preparation and presentation, candidates demonstrate comprehensive understandings of knowledge and practices in the teaching of literacy as well as an ability to apply these understandings in a variety of instructional settings. Candidates must also provide evidence that they have met all college criteria for the master's degree and the New York State Education Department criteria for certification sought. A grade of S (Satisfactory) or U (Unsatisfactory) is assigned for this course. Prerequisites: EDU 651, 669 and 693; completion of 30-hour master's program. (3 cr. hr.)

EDU 654: Seminar In Elementary Science Education II

(O) In-depth study of area of interest to student. Development of research proposal to be implemented, evaluated as integral part of course. Prerequisite: EDU 648. (3 cr. hr.)

EDU 656: Classroom Applications of Child Development

(B) This course is designed to examine the relationship between child development and elementary school curricula with a focus on identifying children's strengths and appreciating individual differences in order to promote the optimal development and learning of children with diverse characteristics and varying abilities and disabilities. Prerequisites: EDU 516 and 650. (3 cr. hr.)

EDU 657: Elementary School Practicum and Research Seminar

(B) This course has two components. Students will participate in a 100-hour practicum in an elementary school setting. Here they will work collaboratively with the classroom teacher in areas of planning, instruction, assessment and classroom management that will lead them towards a clearer understanding of the role of the teacher in the classroom and prepare them for the more intense student teacher semester. In addition, they will attend a weekly seminar focusing on issues related to the practicum. They will also explore issues, trends, and practices in classroom inquiry and teacher action research that will lead to the development of a research proposal for the MST Program master's project. The MST Coordinator will oversee the students' practicum experience. Prerequisites: EDU 516 and 650. (3 cr. hr.)

EDU 658: Classroom Organization and Management: Theory and Practice

(B) The course will introduce students to theories of classroom organization and management which address student learning and development. The course will include exploration of teachers' practices as they relate to the structure of schools, and student diversity, learning and development. Models for organization and management of the classroom environment, materials and procedures will be discussed, as will models for identifying, preventing and resolving behavior problems and promoting personal and social responsibility. All models considered in the course will be examined in light of application to experiences in the practicum setting. Prerequisites: EDU 516 and 650. (3 cr. hr.)

EDU 660: Curriculum Analysis in American Education

(A) The purpose of this course is to give students analytical tools with which to examine and create curricula so that curriculum material will best serve the needs of all learners. The course is presented in part as an historical overview of the curriculum field to help students understand the purposes and processes of public education. (3 cr. hr.)

EDU 662: Language Development in Adolescents

(F) Combines models of first-language acquisition, the structure of the English language, cooperative learning, sentence combining, and accelerated learning to develop an overall model for enhancing language development of all adolescents, regardless of dialect and socioeconomic standing. Prerequisite: Graduate status. (3 cr. hr.)

EDU 663: Seminar in Research in the Teaching of English
(S) This study of empirical investigations of the teaching of English will culminate in students writing a review of research in a particular aspect of teaching English or conducting an original research study. Prerequisites: Completion of 12 hours of graduate work in English and 12 in education. (3 cr. hr.)

EDU 666: Curriculum Construction
(O) Principles, practices, issues underlying construction of curriculum for public school. Analysis of selected programs. (Also listed as EDA 666.) (3 cr. hr.)

EDU 667: Secondary School Curriculum
(O) Critical examination of secondary school curricula: organization, historical perspective, programs, evaluation and planning for change. Prerequisite: Teacher certification. (3 cr. hr.)

EDU 669: The Literacy Specialist and The Literacy Program
(A) Seminar format encourages students to begin synthesizing information from previous courses into coherent literacy programs in schools. Examines different approaches to reading from policy and programmatic perspectives. Emphasis is given to the concept of literacy specialists as both initiators and implementers of literacy programs. Prerequisites: EDU 528; EDU 540 or 550. (3 cr. hr.)

EDU 670: Foundations of Education
(B) This course will focus on the historical, philosophical, political-economic and social foundations of education, with an investigation of the basic purposes or ends of American schooling since the rise of the Common School in the 19th century. Topics will be examined in relation to current scholarship, the links between educational thought and practice as reflected in students' observations during the Practicum, and the thematic threads in the MST Program. Prerequisites: EDU 516 and 650. (3 cr. hr.)

EDU 671: Issues in Foundations of Education
(A) EDU 671 presents historical, philosophical, political-economic and social foundations of education interpreted through seminal and contemporary research on issues of American schooling. Inquiry, critical thinking and writing will be focused on the thinking about and practices of education and schooling regarding diversity, equity, professionalism, leadership, public access and political control. (3 cr. hr.)

EDU 672: The History of Western Education
(O) Educational thought, practice in Western civilization from prehistoric times to twentieth century. (3 cr. hr.)

EDU 673: Social Foundations of Education
(O) Role, basic issues of education in contemporary American society. (3 cr. hr.)

EDU 674: History of American Education
(O) Development of educational institutions, thought, and practice in the United States from the colonial period to the present, including minority schooling, higher education, and teaching, in the context of American culture and economics. (3 cr. hr.)

EDU 675: Philosophical Issues in Education
(O) A study of issues in education in relation to broader philosophical conceptions of nature, knowledge, the individual and society. Topics include role of education for social structure, individual freedom and development, empowerment, social progress. Philosophers studied include Plato, Rousseau, Dewey, Freire. (Also listed as PHI 675.) (3 cr. hr.)

EDU 679: Organization and Administration of School Reading Program
(O) Course designed to help reading consultants, curriculum supervisors and administrators — all school personnel — develop an understanding of the many considerations involved in organizing, administering a school reading program. (3 cr. hr.)

EDU 680: Assessment and Instruction of Learners Experiencing Literacy Difficulties, Birth-Grade 6
(A) This course explores assessment and instruction methods, materials, and research surrounding the literacy difficulties experienced by learners from Birth-Grade 6. A field experience equal to 1 credit hour is required. The course is appropriate for those who are or will be classroom teachers, literacy specialists, or literacy supervisors. Prerequisites: EDU 528; EDU 540. (Also listed as SPE 680). (4 cr. hr.)

EDU 681: Assessment and Instruction of Learners Experiencing Literacy Difficulties, Grade 5-12
(A) This course explores methods, materials, and research surrounding literacy difficulties experienced by students in 5-12 classrooms. A field experience equal to one credit hour is required. The course is appropriate for those who are or will be classroom teachers, literacy specialists or literacy supervisors. Prerequisites: EDU 528, EDU 550. (4 cr. hr.)

EDU 683: Supervision in Elementary School Science
(O) Organization, principles, techniques for pre-kindergarten through middle schools. Curriculum development, design emphasizing techniques for evaluation. Prerequisites: EDU 648, 654. (3 cr. hr.)

EDU 684: Supervision of Student Teaching
(O) Identification of needs, problems of prospective teachers. Ways to guide, evaluate during student teaching experience. For teachers who are or will be supervising student teachers. Sectioning for elementary, secondary emphasis. (3 cr. hr.)

EDU 687: Introduction to Counseling and Guidance
(O) Selected personality theories, related concepts of counseling; applied techniques to educational settings. (3 cr. hr.)

EDU 690: Student Teaching I
(B) The culmination of the MST Program, this faculty-supervised teaching experience emphasizes applying the principles of learning and research gained throughout the program. A six-week, first-half semester of teaching in childhood or middle childhood settings (grades 1-6). Prerequisites: EDU 658 and 670. (6 cr. hr.)

EDU 691: Student Teaching II
(B) The culmination of the MST Program, this faculty-supervised teaching experience emphasizes applying the principles of learning and research gained throughout the program. A six-week, second-half semester of teaching in childhood or middle childhood settings (grades 1-6). Prerequisites: EDU 658 and 670. (6 cr. hr.)

EDU 693: Literacy Practicum
(A) The practicum is a college-supervised experience in the assessment and instruction of students experiencing literacy problems at both levels of the certificate sought. For the literacy certificate birth-grade 6, the practicum must include experiences with students from birth-grade 2 and grades 3-6. For the literacy certificate grades 5-12, the practicum must include experiences with students in grades 5-9 and grades 10-12. A minimum of 50 clock hours is required overall with not fewer than 20 hours completed at any given level. Attendance at a weekly seminar is also required. Prerequisites: EDU 528, EDU 540 or 550, EDU 680 or 681, and EDU 628 or 629 or 649. (4 cr. hr.)

EDU 695: Seminar in Reading

(A, M) Research in reading instruction in United States, abroad. Evaluation of methodological innovations, materials of instruction; philosophical and psychological foundations. Prerequisite: EDU 669. (3 cr. hr.)

EDU 698: Student Teaching/Culminating Research Project Seminar

(B) The culminating activity in the MST Program, this course will connect the strands of the program through review of research and discussion of philosophy, theory and practice. This seminar will meet for 1-1/2 hours per week during each week of student teaching and for approximately 20 hours during the week between student teaching experiences. The seminar will focus on issues related to student teaching and completing the research project. Corequisite with EDU 690 and 691. Prerequisites: EDU 657. (3 cr. hr.)

EDU 699: Master's Thesis

(A) Optional culminating activity, resulting in original research and writing on a topic appropriate to a student's program, under direction of a thesis committee. Students accepted only at option of Education Department. Master's thesis guidelines available from Education Department. Prerequisites: EDU 651, consent of department and completion of 24 hours of course work. (6 cr. hr.)

Education Administration Courses**EDA 606: Seminar in Athletic Directing and Physical Education**

(O) For directors of physical education and athletic directors in public schools. (Also listed as EDU 606.) (3 cr. hr.)

EDA 613: School Business Management

(C) Administration, management of business phase in public schools. (3 cr. hr.)

EDA 615: Education Law

(B) Statute, quasi-law as they affect personnel, students, operation of public schools. (3 cr. hr.)

EDA 616: Administration of School Curriculum

(B) Roles of administrators in providing leadership in the curriculum process, articulation, analysis, use of resources, management of staff, organizational change, communication, providing for students with special needs. (3 cr. hr.)

EDA 618: Administrative Field Experience

(O) Students will develop an understanding of various administrative positions and their responsibilities through on-site experiences and interactions with practicing school administrators. (3 cr. hr.)

EDA 629: Special Topics in Education Administration

(O) Special topics of interest to graduate students enrolled in the Certificate of Advanced Study (CAS) program. May be repeated for credit only when topic changes. (3 cr. hr.)

EDA 655: Administration of School Personnel

(B) Organization, administration of school personnel; specific responsibilities, leadership role of administrator. (3 cr. hr.)

EDA 656: Public School Finance

(B) Educational revenue, budgeting, disbursement for teachers, administrators; real property taxes, state aid, budget, construction, bond issues, disbursement procedures. (3 cr. hr.)

EDA 657: Foundations of Education Administration

(B) Basic concepts of administrative, supervisory theory, practice. Foundation for more advanced administration courses for specialized personnel. (3 cr. hr.)

EDA 666: Curriculum Construction

(B) Principles, practices, issues underlying construction of curriculum for public school. Analysis of selected programs. (Also listed as EDU 666.) (3 cr. hr.)

EDA 678: Principles of Supervision

(B) Concepts, objectives of supervision, organization of supervisory programs, techniques of supervision. (3 cr. hr.)

EDA 679: School Improvement Planning/Effective Schools

(O) Focus on developing leadership role for administrators in school improvement planning using the Effective Schools Model. (3 cr. hr.)

EDA 680: The School Principal

(C) Role, responsibilities of administrator; school organization, professional ethics, school-community relationship. (3 cr. hr.)

EDA 681: Contract Negotiation and Contract Administration

(C) Negotiation of contracts and administration of contracts for public employees covered by the Public Employees' Fair Employment Act. (3 cr. hr.)

EDA 682: Organizational Development

(O) Processes for building, improving and maintaining effective organizations and the role of leadership in such efforts. (3 cr. hr.)

EDA 683: Administration of Special Education

(O) CSE, placement, preschool, curriculum, law, finance, supervision. (Also listed as SPE 683.) (3 cr. hr.)

EDA 684: Seminar in Educational Administration

(C) Current purpose, problems of secondary school curriculum, students, staff, community, plant, activities. (3 cr. hr.)

EDA 685: Facility Planning, Design, Maintenance, and Utilization of Public Buildings

(O) School planning standards and design considerations including maintenance programs and building utilization. (3 cr. hr.)

EDA 686: Technology in School Administration

(O) Applications of technology in educational administration: planning, research, communication, publishing, presentations. (3 cr. hr.)

EDA 687: Women in Educational Administration

(O) A seminar focusing on literature and research related to such issues as male/female leadership styles as these affect women in educational administration; career ladders, accounts of women in educational administration, data on representation of women in administrative areas, and other issues including balancing home and career, the "glass ceiling," mentoring. (3 cr. hr.)

EDA 696: School Administration and Supervision Internship

(A) Internship under supervision of practicing school administrator and representative of the College in a public school district. May consist of full-time internship for half year (either fall or spring semester, 3 cr. hr.), half-time internship for fall and spring semesters (1.5 cr. hr. each semester), full-time for fall and spring semesters (3 cr. hr. each semester), or full-time internship for full year (fall, spring and summer, 2 cr. hr. each semester). Three to six credits may be earned depending upon type of internship selected from above and approved by college supervisor. Prerequisites: EDA 613, 615, 655 and 657, and EDA 616 or 678. (3-6 cr. hr.)

Special Education Courses

SPE 510: Teaching the Special Education Learner in the General Education Classroom

(O) This course provides a knowledge of special education to teachers who are seeking to accommodate students with disabilities more effectively in their classrooms and schools. (3 cr. hr.)

SPE 610: Advanced Assessment, Curriculum and Instruction of Students with Disabilities (4), (Math, Science, and Social Studies)

(B) This advanced course provides theoretical and practical applications of assessment (formal and informal) and pedagogy within the general education elementary curriculum for students with disabilities. The course covers the content areas of mathematics, science, and social studies for students with disabilities. Students will become familiar with a variety of commercial and teacher-made packages, in order to develop and select instructional content, resources, and strategies that respond to cultural, linguistic, gender, and ability differences among children with disabilities. A 50 hour field component is included in this course. (3 cr. hr.)

SPE 620: Discipline and Social Skill Development for Students with Disabilities

(B) This course will provide instruction on educational terminology, assessment and diagnoses, researched based theory, and application strategies for classroom management, discipline, and social skill development for students with disabilities, especially individuals with behavioral and/or emotional challenges. Students will learn how to identify appropriate prevention and intervention strategies, including functional analysis, applied behavioral analysis, positive behavioral supports, and other research based approaches. In addition, students will learn how to apply these models, using research-supported strategies and practices. Students will learn the legal protections afforded students presenting emotional/behavioral characteristics. Prerequisite: SPE 510. (3 cr. hr.)

SPE 630: Students with Disabilities in Context

(B) Within the contexts of home, school, and community, students will learn about the multicultural and personal characteristics of elementary age children who have disabilities, including psychological and social-emotional characteristics, academic and family needs. From historical and contemporary study, students will learn about normalization, impact of medical complications, nature of developmental delays, Committee on Special Education procedures, planning and managing the school and home environment, functional analysis, and related topics. This course includes a 75 hour practicum (minimum), 50 hours of which must be spent in a school setting with children with disabilities., 25 hours of which must be spent with a family whose child has a disability. (Students seeking the extension in severe and/or multiple disabilities, will be placed accordingly.) Prerequisite SPE 510. (4 cr. hr.)

SPE 640: Teaching Students with Severe/Multiple Disabilities

(O) This course is designed to inform the student about the nature and characteristics of students with severe and/or multiple disabilities, including mental retardation, autism, pervasive developmental delay, and other severe disabilities as defined by federal and state statute, and as considered in various theoretical frameworks. In addition, the student will learn about techniques, strategies, models of instruction, and the nature of different types of supports to enable elementary school students with severe and/or multiple disabilities to successfully participate in the general education classroom. The role of the special educator will be described and defined. Prerequisite: SPE 510. (3 cr. hr.)

SPE 650: Autism Spectrum Disorders

(B) This course will explore the core characteristics of autism spectrum disorders and pervasive developmental delays, including social interaction disruptions, communication disturbances (verbal and nonverbal), movement and sensory impairments (including restricted and repetitive behavior patterns). Based upon a thorough understanding of the complexities of these, the course will address effective strategies for successful educational, social, family and community interactions. Prerequisite: SPE 510 or PSY 605. (3 cr. hr.)

SPE 690: Student Teaching with Students with Disabilities

(B) This is the culminating experience in the Teaching Students with Disabilities Masters program. This is a faculty-supervised teaching experience in an inclusive classroom where student teachers will be expected to apply the theoretical, pedagogical, and practical knowledge they have gained during their course of study. This is a six week, one quarter experience. For students seeking the annotation in severe and/or multiple disabilities, this student teaching experience must be in a comparable classroom where these students are being educated — Grades 1-6. (5 cr. hr.)

SPE 691: Professional Seminar in Teaching Students with Disabilities

(B) This course is designed to bring together all the themes in research, philosophy, theory and practice that have been addressed in previous courses in the graduate degree program of Teaching Students with Disabilities. The intent of this course is to enable the graduate student to develop a thoughtful, comprehensive, research based approach to his/her teaching and professional development. Issues presented will relate directly to the graduate student's experiences throughout the course of study. (1 cr. hr.)

Annotation in Severe and/or Multiple Disabilities

SPE 640: Teaching Students with Severe/Multiple Disabilities

(O) This course is designed to inform the student about the nature and characteristics of students with severe and/or multiple disabilities, including mental retardation, autism, pervasive developmental delay, and other severe disabilities as defined by federal and state statute, and as considered in various theoretical frameworks. In addition, the student will learn about techniques, strategies, models of instruction, and the nature of different types of supports to enable elementary school students with severe and/or multiple disabilities to successfully participate in the general education classroom. The role of the special educator will be described and defined. Prerequisite: SPE 510. (3 cr. hr.)

SPE 650: Autism Spectrum Disorders

(B) This course will explore the core characteristics of autism spectrum disorders and pervasive developmental delays, including social interaction disruptions, communication disturbances (verbal and nonverbal), movement and sensory impairments (including restricted and repetitive behavior patterns). Based upon a thorough understanding of the complexities of these, the course will address effective strategies for successful educational, social, family and community interactions. (3 cr. hr.)

English

DEPARTMENT

Old Main, Room 112
 (607) 753-4307
 E-mail: knappk@cortland.edu
<http://www.cortland.edu/english>

SCHOOL

Arts and Sciences

FACULTY

T. Ellen Hill (Coordinator)
 See page 108 for a complete listing.

PROGRAMS OFFERED

Master of Arts in English
 Master of Arts in Teaching in Adolescence Education:
 English (7-12)
 Master of Science in Education in Adolescence Education:
 English (7-12)

Master of Arts English [ENG]

A minimum of 30 credit hours of approved graduate work as described hereafter is required for the master of arts degree. A minimum of nine credit hours must be taken in courses at the 600 level.

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, the applicant for enrollment in the program leading to a master's degree in English should present the following:

1. At least a B average in undergraduate English courses
2. At least a C+ cumulative average for all undergraduate courses
3. A foreign language is desirable, but the requirement may be met concurrently with graduate study
4. Approval of the Graduate English Committee
5. Thirty-three hours of undergraduate literature or 27 hours of literature and six hours of study in the English language or linguistics

LANGUAGE REQUIREMENT

Competency in one modern foreign language or one classical language must be demonstrated before the student's completion of graduate work, unless the student demonstrated this competency prior to admission. Competency in a foreign language is defined as the skill level attained by one year of college-level study or the equivalent of a language other than English. If this requirement has not already been met, the candidate may take language courses concurrently with graduate study.

MASTER'S PAPER

Requirements for the degree include submission of a master's paper. This will be a substantial paper based upon one of the approaches to literary analysis and interpretation studied in the course, Seminar in Literary Criticism. The paper should present an original thesis and incorporate the most recent research on the topic. This paper must be submitted at least two months prior to the date the student expects to receive the degree and may not be submitted before degree candidacy is established.

ADDITIONAL REQUIREMENTS

A comprehensive examination is required. Other requirements for the award of the degree may be determined by the English Department and must be ascertained by the student in consultation with a departmental graduate advisor.

PROGRAM REQUIREMENTS

- ENG 500: Old English *or*
 ENG 601: History of the English Language *or*
 ENG 632: Middle English Literature
- One course in 16th or 17th century British Literature
 ENG 530: Chaucer
 ENG 538: Studies in Seventeenth-Century English Literature
 ENG 539: Milton
 ENG 632: Middle English Literature
 ENG 636: Seminar in Shakespeare
 ENG 640: Studies in English 1660-1800
- One course in 18th or 19th Century British Literature
 ENG 547: 19th Century British Women Writers
 ENG 645: Studies in the Romantic Era
 ENG 646: Studies in the Victorian Era
- One course in 20th century British or American Literature
 ENG 548: Studies in British Literature 1950-Present
 ENG 616: Studies in American Literature from 1900 to 1950
 ENG 617: Studies in American Literature Since 1950
 ENG 677: Seminar in Contemporary British Literature
- One other course in American Literature
 ENG 615: Studies in American Literature to 1900
 ENG 616: Studies in American Literature from 1900-1950
 ENG 617: Studies in American Literature Since 1950
 ENG 622: Seminar in American Women Writers
 ENG 672: Seminar in Literary Criticism

Twelve credit hours of electives in English by advisement, to ensure, in conjunction with the student's undergraduate program, adequate distribution of courses over the fields of English and American literature.

Note: Requirements in the various categories may also be met by appropriate ENG 529 or 629 Special Topics courses.

TOTAL CREDIT HOURS REQUIRED: 30

Master of Arts in Teaching Adolescence Education: English (7-12) [AEE]

This program is currently under review by the New York State Education Department and is subject to modification pending final approval.

The M.A.T. degree is designed for individuals who have completed a baccalaureate degree and are seeking a teaching certificate in adolescence education: English (7-12). It is not open to students who already have initial certification in secondary English. The program provides

- the pedagogical course work, practica, and student teaching experiences necessary for the initial certificate that qualifies individuals to teach in the public schools in New York State

- the opportunity for advanced study in English and the language arts
- the master's degree necessary for the professional certificate in adolescence education: English (7-12).

A minimum of 49 semester hours of approved graduate study as described hereafter is required for the M.A.T. degree.

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, the applicant for enrollment in the program leading to a M.A.T. in Adolescence Education: English (7-12) should present the following:

1. At least a B average in undergraduate courses in English, Rhetoric, or Comparative Literature.
2. A grade point average of at least 2.5 in all undergraduate courses.
3. One year of college-level study or the equivalent of a language other than English. If this requirement has not already been met, the candidate may take language courses concurrently with graduate study.
4. Two letters of reference.
5. Approval of the Graduate English Committee.
6. A minimum of 24 hours of approved undergraduate courses in English, Rhetoric, or Comparative Literature.
7. An interview with the director of the M.A.T. adolescence education: English (7-12) program.

Any deficiencies in the candidate's previous training resulting from inadequate undergraduate preparation in the subject area or major shall be removed by early advisement with the Adolescent Education advisor.

LANGUAGE REQUIREMENT

Individuals making application for an initial certificate as a teacher of adolescence education: English (7-12) in New York State are required to complete one year of college-level study or the equivalent of a language other than English. If this requirement has not already been met, the candidate may take language courses concurrently with graduate study.

ADDITIONAL REQUIREMENTS

Thesis based on independent research: Students are required to submit a master's thesis based on independent research. The thesis is on a topic related to teaching the English Language Arts, and it grows out of the work that students do in AED 663: Research in the Teaching of English.

AED 663, an introduction to research methods in English education, surveys quantitative and qualitative approaches to inquiry. Its ultimate goal is to help students prepare to write the masters paper requirement in the MAT program. It also prepares them to become researchers of their teaching and of their students' learning, and it enables them to reflect critically on their practice.

The master's thesis is a twenty-five- to thirty-page analysis, based in part on a review of the existing research. It requires students to make an original contribution to our understanding of the learning and teaching of the English Language Arts.

The master's thesis and student-teaching portfolio must be submitted at least two months prior to the date the student expects to receive the degree and may not be submitted before degree candidacy is established.

M. A. T. PORTFOLIO

Students are required to submit a student-teaching portfolio that provides documentation of reflective practices and teaching and learning processes.

STUDENT TEACHING REQUIREMENT

To be eligible to student teach, students must have completed 13 credit hours in the pedagogical core, including ENG 502, ENG 503, AED 541, AED 660, AED 662, and AED 585, and 6 credit hours in the content core.

COURSE OF STUDY

A. Pedagogical Core: 34-35 credit hours

ENG 502, ENG 503, AED 541, AED 660, AED 662, and AED 585 must be completed before student teaching.

Students are required to take the courses listed below.

ENG 502: Seminar in the Composing Process: Rhetoric and Analysis

ENG 503: Participant Observation Experience: Composing Process (30 hours of fieldwork)

AED 541: Teaching Literature and Critical Literacy

AED 660: Participant/Observer Experience: Language Development (30 hours of fieldwork)

AED 662: Language Development in Adolescents

AED 585: Participant/Observer Experience (40 hours of fieldwork)

AED 663: Seminar in Research in the Teaching of English

EDU 671: Issues in Foundations of Education

AED 586: Practicum I: Student Teaching in the Middle School

AED 587: Practicum II: Student Teaching in the Secondary School

One of the following health courses:

HLH 110: Personal and Community Health

HLH 199: Critical School Health Issues

HLH 510: Proseminar in Health Foundations

Child Abuse Recognition and Reporting workshop

School Violence Prevention and Intervention workshop

B. Content Core: 15 credit hours

Students are required to take a minimum of five courses in literature and/or rhetoric. These courses are selected in consultation with the director of adolescence education. Course selection is intended to increase knowledge of literature and to meet the content distribution required for a teacher of secondary English. A minimum of nine semester hours must be taken in courses at the 600 level. Depending on students' background, students may be required to take a minimum of one course from each of the following six categories:

One course in American literature with emphasis on women authors and authors of color:

ENG 615: Studies in American Literature to 1900

ENG 616: Studies in American Literature 1900 to 1950

ENG 617: Studies in American Literature since 1950

ENG 622: Seminar in American Women Writers

One course in Literature before 1800:

ENG 500: Old English

ENG 530: Chaucer

ENG 538: Studies in Seventeenth-Century English Literature

ENG 539: Milton

ENG 632: Middle English Literature

ENG 636: Seminar in Shakespeare

ENG 640: Studies in English Literature 1660-1800

One course in British and/or Irish Literature:

ENG 500: Old English

ENG 530: Chaucer

ENG 538: Studies in Seventeenth-Century English Literature
 ENG 539: Milton
 ENG 547: 19th Century British Women Writers
 ENG 548: Studies in British Literature 1950-Present
 ENG 549: Studies in Irish Literature
 ENG 632: Middle English Literature
 ENG 636: Seminar in Shakespeare
 ENG 640: Studies in English Literature 1660-1800
 ENG 645: Studies in the Romantic Era
 ENG 646: Studies in the Victorian Era
 ENG 677: Studies in Contemporary British Literature

One course in World Literature with emphasis on women authors and authors of color:
 ENG 618: Global Multicultural Literature
 ENG 678: World Drama

One course in Literature for Young Adults with emphasis on women authors and authors of color:
 ENG 619: Seminar in Literature for Adolescents

One course in technology:
 ENG 506: Computers and the Study of English

Students who have met the content distribution may select additional courses from among the following electives:
 ENG 529, 629: Special Topics
 ENG 601: History of the English Language
 ENG 602: Rhetorical Tradition: Connecting Reading and Writing
 ENG 699: Independent Study

TOTAL CREDIT HOURS REQUIRED: 49-50

Master of Science in Education Adolescence Education: English (7-12) [AEE]

This program is currently under review by the New York State Education Department and is subject to modification pending final approval.

The M.S.Ed. program is designed for individuals who hold an initial teaching certificate and are seeking a professional certificate in adolescence education: English (7-12). The M.S.Ed. program provides

- the pedagogical course work necessary for the professional certificate
- the opportunity for advanced study in English and the language arts
- the master's degree necessary for permanent certification.

A minimum of 30 credit hours of approved graduate study as described hereafter is required for the M.S.Ed. degree. A minimum of nine credit hours must be taken in courses at the 600 level.

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, the applicant for enrollment in the program leading to a Master of Science in Education in Adolescence Education: English (7-12) should present the following:

1. At least a B average in undergraduate English courses.
2. A grade point average of at least 2.5 for all undergraduate courses.
3. One year of college-level study or the equivalent of a language other than English. If this requirement has not already been met, the candidate may take language courses concurrently with graduate study.

4. Provisional or initial certificate in adolescence English as a requirement for entry into the program
5. Two letters of reference.
6. Approval of the Graduate English Committee.
7. A minimum of 24 hours of approved undergraduate courses in English, Rhetoric, or Comparative Literature.
8. An interview with the director of English Department Graduate Studies.

Any deficiencies in the candidate's previous training resulting from inadequate undergraduate preparation in the subject area or major shall be removed by early advisement with the director of English Department Graduate Studies.

LANGUAGE REQUIREMENT

Individuals making application for an initial certificate as a teacher of adolescence education: English (7-12) in New York State are required to complete one year of college-level study or the equivalent of a language other than English. If this requirement has not already been met, the candidate may take language courses concurrently with graduate study.

ADDITIONAL REQUIREMENTS

Thesis based on independent research: Students are required to submit a master's thesis based on independent research. The thesis is on a topic related to teaching the English Language Arts, and it grows out of the work that students do in AED 663: Research in the Teaching of English.

AED 663, an introduction to research methods in English Education, surveys quantitative and qualitative approaches to inquiry. Its ultimate goal is to help students prepare to write the master's paper. It also prepares them to become researchers of their teaching and of their students' learning, and it enables them to reflect critically on their practice.

The master's thesis is a twenty-five- to thirty-page analysis, based in part on a review of the existing research. It requires students to make an original contribution to our understanding of the learning and teaching of the English Language Arts.

The master's thesis must be submitted at least two months prior to the date the student expects to receive the degree and may not be submitted before degree candidacy is established.

COURSE OF STUDY

A. Pedagogical core: 12 credit hours

Students are required to take 12 credit hours of courses that link content and pedagogy.

- ENG 502: Seminar in the Composing Process: Rhetoric and Analysis
- AED 541: Teaching Literature and Critical Literacy
- AED 662: Language Development in Adolescents
- AED 663: Seminar in Research in the Teaching of English

B. Content Core: 18 credit hours

Students are required to take a minimum of six courses in literature and/or rhetoric. These courses are selected in consultation with director of English Department graduate studies. Course selection is intended to increase knowledge of literature and to meet the content distribution required for a teacher of secondary English. A minimum of nine credit hours must be taken in courses at the 600 level. Depending on students' background, students may be required to take a minimum of one course from each of the following six categories:

One course in American Literature with emphasis on women authors and authors of color

ENG 615: Studies in American Literature to 1900

ENG 616: Studies in American Literature 1900 to 1950

ENG 617: Studies in American Literature since 1950

ENG 622: Seminar in American Women Writers

One course in Literature before 1800

ENG 500: Old English

ENG 530: Chaucer

ENG 538: Studies in Seventeenth Century-English Literature

ENG 539: Milton

ENG 632: Middle English Literature

ENG 636: Seminar in Shakespeare

ENG 640: Studies in English Literature 1660-1800

One course in British and/or Irish Literature

ENG 500: Old English

ENG 530: Chaucer

ENG 538: Studies in Seventeenth Century-English Literature

ENG 539: Milton

ENG 547: 19th Century British Women Writers

ENG 548: Studies in British Literature 1950-Present

ENG 549: Studies in Irish Literature

ENG 632: Middle English Literature

ENG 636: Seminar in Shakespeare

ENG 640: Studies in English Literature 1660-1800.

ENG 645: Studies in the Romantic Era

ENG 646: Studies in the Victorian Era

ENG 677: Studies in Contemporary British Literature

One course in World Literature with emphasis on women authors and authors of color

ENG 618: Global Multicultural Literature

ENG 678: World Drama

One course in Literature for Young Adults with emphasis on women authors and authors of color

ENG 619: Seminar in Literature for Adolescents

One course in technology

ENG 506: Computers and the Study of English

Students who have met the content distribution may select additional courses from among the following electives:

ENG 529, 629: Special Topics

ENG 601: History of the English Language

ENG 602: Rhetorical Tradition: Connecting Reading and Writing

ENG 699: Independent Study

TOTAL CREDIT HOURS REQUIRED: 30

Middle Childhood Extension (Grades 5-6)

Students electing to take the Middle Childhood Extension may do so by completing six additional credit hours in middle childhood education:

PSY 533: Advanced Developmental Psychology *and*

EDU 533: Introduction to Middle Childhood Education.

Students with the extension are required to fulfill a minimum of 36 credit hours of graduate study.

Example of the M.A.T. degree in Adolescence Education: English (7-12) [AEE] over two years

First Year	Second Year
<p><i>Fall</i></p> <p>AED 541 ENG 502 ENG 503 (30 hours field experience) AED 660 (30 hours field experience) AED 662 HLH course Total credit hours: 13-14</p>	<p><i>Fall</i></p> <p>ENG elective* ENG elective* AED 671 Master's thesis, portfolio, Preventing School Violence Workshop *See required content distribution list Total credit hours: 9</p>
<p><i>Spring</i></p> <p>AED 663 ENG 619 or ENG elective* ENG 506 or ENG elective* ENG 618 or 678 or elective* Child Abuse Workshop *See required content distribution list Total credit hours: 12</p>	<p><i>Spring</i></p> <p>AED 585 AED 586 AED 587 May degree Total credit hours: 15</p>

Example of the M.S.Ed. degree in Adolescence Education: English (7-12) [AEE] over one year

<p><i>Fall</i></p> <p>AED 541 ENG 502 AED 662 ENG 506 or elective* ENG elective* *See required content distribution list Total credit hours: 15</p>	<p><i>Spring</i></p> <p>AED 663 ENG 619 or elective* ENG 618 or 678 or elective* ENG elective* ENG elective* Total credit hours: 15</p>
<p><i>Summer</i></p> <p>Complete Master's thesis August or December degree</p>	

The following required courses are offered only in the fall semester:

ENG 502: Seminar in the Composing Process: Rhetoric and Analysis

AED 541: Teaching Literature and Critical Literacy

AED 662: Language Development in Adolescents

This course is offered only in the spring semester:

AED 663: Seminar in Research in the Teaching of English

Example of the M.A.T. degree in Adolescence Education: English (7-12) [AEE] over three years

First Year

Fall

AED 541
 ENG 502
 ENG 503 (30 hours of fieldwork)
 Total credit hours: 7

Spring

AED 663
 ENG 619 or elective*
 Child Abuse Workshop
 Total credit hours: 6

Summer

ENG elective*
 ENG or elective*
 *See required content distribution list
 Total credit hours: 6

Second Year

Fall

AED 660 (30 hours of fieldwork)
 AED 662
 HLH course
 Total credit hours: 6-7

Spring

AED 585
 AED 586
 AED 587
 Total credit hours: 15

Summer

EDU 671
 ENG 618 or 678 or elective*
 *See required content distribution list
 Total credit hours: 6

Third Year

Fall

ENG 506 or elective*
 Complete Master's thesis by Nov. 1 for Dec. degree
 Student Teaching Portfolio Preventing School Violence Workshop
 *See required content distribution list
 Total credit hours: 3
 December degree

The following required courses are offered only in the fall semester:

ENG 502
 ENG 503
 AED 541
 AED 660
 AED 662

This course is offered only in the spring semester:
 AED 663

ENG 506: Computers and the Study of English (B) Introduces graduate students, particularly students who plan to teach or are currently teaching English at middle school, secondary school, or adult levels, to computer tools and environments that complement the study of literature, language, rhetoric, and composition. (3 cr. hr.)

ENG 529, 629: Special Topics in English Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit (1-4 cr. hr.)

ENG 530: Chaucer (O) Poetry of Chaucer in Middle English; emphasis upon literary rather than linguistic aspect of his work. (3 cr. hr.)

ENG 538: Studies in Seventeenth-Century English Literature (O) Intensive study of a few authors or literary movement from roughly 1600 to 1660. May be repeated as subtitle changes. (3 cr. hr.)

ENG 539: Milton (O) Poetry and prose. (3 cr. hr.)

ENG 547: 19th Century British Women Writers (O) This course will focus on the British women writers of the nineteenth century, with attention to the various genres of the era — novel, poetry, essay. Prerequisites: The course is open to seniors in good academic standing, for undergraduate credit; credit at graduate level requires an undergraduate degree. (3 cr. hr.)

ENG 548: Studies in British Literature 1950-Present (O) Study of selected author(s), theme, genre or movement of the period. (3 cr. hr.)

ENG 549: Studies in Irish Literature (O) Intensive study of a few authors or of literary movements in Irish literature, such as Irish Renaissance. May be repeated as subtitle changes. (3 cr. hr.)

ENG 600: Advanced Grammar and Usage (O) Historical, social elements behind conflicting usages of current American English; problems on language learning and application of modern linguistic principles with attention to structural generative language models. (3 cr. hr.)

ENG 601: History of the English Language (O) Prehistory of English: reconstructed Indo-European, Germanic. Historical survey of sound, structural changes from 900 to present with some attention to lexical borrowings. (3 cr. hr.)

ENG 602: Rhetorical Tradition (O) A survey of rhetorical theory from antiquity to the present, examining the applicability of rhetorical tradition for today's writers, students, and teachers. (3 cr. hr.)

ENG 615: Studies in American Literature to 1900 (O) Intensive study of a few authors or literary movement to 1900. May be repeated as subtitle changes. (3 cr. hr.)

ENG 616: Studies in American Literature From 1900 to 1950 (O) Intensive study of one or two authors or a literary movement from 1900 to 1950. May be repeated as subtitle changes. (3 cr. hr.)

ENG 617: Studies in American Literature Since 1950 (O) Intensive study of one or two authors or a literary movement since 1950. May be repeated as subtitle changes. (3 cr. hr.)

ENG 618: Global Multicultural Literature (C) Close readings of representative texts by major contemporary writers of color from around the world. (3 cr. hr.)

English

GRADUATE COURSES

ENG 500: Old English (O) Phonemic and grammatical structures of Old English; translation and analyses of selected West-Saxon texts; general background reading in history of English language, major trends in Old English literature. (3 cr. hr.)

ENG 502: Seminar in the Composing Process: Rhetoric and Analysis (F) The seminar is an experimental and theoretical approach to the teaching of writing, focusing on research, theory, and practice. M.A.T. students must be concurrently enrolled in ENG 503. (3 cr. hr.)

ENG 503: Participant-Observer Experience: Composing Process (F) A 30-hour field experience supervised by the course instructor. Students must be concurrently enrolled in ENG 502. (1 cr. hr.)

ENG 619: Seminar in Literature for Adolescents

(S) Critical study, examination, and evaluation of literature written specifically for adolescents and works written for an adult audience but incorporated into the canon of young adult literature.

(3 cr. hr.)

ENG 622: Seminar in American Women Writers

(O) Intense examination of the literature of American Women writers with attention to literary history and criticism. (3 cr. hr.)

ENG 632: Middle English Literature

(O) Most significant works by English writers in periods 1200-1500, in Middle English. (3 cr. hr.)

ENG 636: Seminar in Shakespeare

(B) Representative problems in critical and scholarly examination of Shakespeare's plays. Prerequisite: Semester course in Shakespeare. (3 cr. hr.)

ENG 640: Studies in English Literature 1660-1800

(O) Two or three authors of Restoration Period, 18th century. (3 cr. hr.)

ENG 645: Studies in the Romantic Era

(O) Two or three major poets, essayists or novelists in English literature, 1780-1830. (3 cr. hr.)

ENG 646: Studies in the Victorian Era

(O) Two or three major writers in England, Ireland in Victorian Age. (3 cr. hr.)

ENG 672: Seminar in Literary Criticism

(B) Study of examples of several contemporary approaches to literary analysis and interpretation. Use of one such approach in the writing of multiple drafts of a substantial paper which presents an original thesis and incorporates the most recent research on the topic (master's paper). Fulfills old M.A. requirement for ENG 572. (3 cr. hr.)

ENG 677: Seminar in Contemporary British Literature

(O) Two or three major British writers of 20th century. (3 cr. hr.)

ENG 678: World Drama

(C) A survey of drama from a variety of cultures including Asian, African, and aborigine Australian. (3 cr. hr.)

ENG 699: Independent Study

(O) Advanced study in language and literature open to graduate English students only. Reading, research, papers, examinations and credit hours (not more than six) to be arranged with instructor who directs study and approved by Graduate English Committee. Course may be repeated but for no more than total of six hours. (1-6 cr. hr.)

Related Education Courses**AED 541: Teaching Literature and Critical Literacy**

(F) This course integrates the teaching of literature and critical literacy. Lesson planning, instructional strategies, and teaching with English Language Arts standards are emphasized, as are theory and methods for helping students apply critical reading and writing skills to a range of genres and levels of interpretation. Prerequisite: 3.0 grade point average in the major. (3 cr. hr.)

AED 585: Participant-Observer Experience:

(A) This course is designed to help candidates accumulate the additional 40 hours of pre-service fieldwork at their first student teaching placement. Students, acting as participant/observers for the eight days prior to their first practicum, will develop the reflective disposition needed to make wise instructional decisions. Prerequisites: ENG 502, AED 541 and AED 662. (1 cr. hr.)

AED 586: Practicum I: Student Teaching in the Middle School

(B) Supervised student teaching in a middle school for students enrolled in the Master of Arts in Teaching in Adolescence Education: English (7-12) program. (7 cr. hr.)

AED 587: Practicum II: Student Teaching in the Secondary School

(B) Supervised student teaching in a high school for students enrolled in the Master of Arts in Teaching in Adolescence Education: English (7-12) program. (7 cr. hr.)

AED 660: Participant-Observer Experience: Language Development

(F) A 30-hour field experience supervised by the course instructor. Students must be concurrently enrolled in AED 662. (1 cr. hr.)

AED 662: Language Development in Adolescents

(F) Combines models of first-language acquisition, the structure of the English language, cooperative learning, sentence combining, and accelerated learning to develop an overall model for enhancing language development of all adolescents, regardless of dialect and socioeconomic standing. M.A.T. students must be concurrently enrolled in AED 660. Prerequisite: Graduate status. (3 cr. hr.)

AED 663: Seminar in Research in the Teaching of English

(S) This study of empirical investigations of the teaching of English will culminate in students writing a review of research in a particular aspect of teaching English or conducting an original research study. Prerequisites: Completion of 12 hours of graduate work in English and 12 in education. (3 cr. hr.)

EDU 671: Issues in Foundations of Education

(A) Presents historical, philosophical, political-economic, and social foundations of education interpreted through seminal and contemporary research on issues on American schooling. Inquiry, critical thinking, and writing will be focused on the thinking about and practices of education and schooling regarding diversity, equity, professionalism, leadership, public access and political control. (3 cr. hr.)

Exercise Science and Sport Studies

Studio West, Room 138
(607) 753-4300
E-mail: ESSS@cortland.edu
<http://www.cortland.edu/esss>

DEPARTMENT

SCHOOL

Professional Studies

FACULTY

See page 118 for a complete listing.

PROGRAMS OFFERED

Master of Science in Exercise Science (proposed for fall 2002 — pending SUNY Board of Trustee approval)

Master of Science Exercise Science

This M.S. degree program is designed to provide the student an in-depth study of the scientific aspects of exercise science and sport. It is intended to prepare individuals for careers or further graduate study in exercise and sport research and also in fitness, wellness and associated industries. The program is designed to be completed within two years.

ADMISSION REQUIREMENTS

1. Completed Admissions Application for Graduate Studies (available at the Admissions Office in Miller Building) and payment of the application fee submitted to the Admissions Office.
2. Graduates of colleges other than SUNY Cortland must request that official transcripts of all undergraduate and post-baccalaureate work be sent to the Admissions Office. Transcripts from SUNY Cortland can be secured by Admissions directly from the Registrar.
3. Evidence of satisfactory scores on the Graduate Record Examination (GRE).
4. Three letters of recommendation must be submitted to the Admissions Office by each applicant. A minimum of one letter should be written by someone who can attest to the student's academic ability, and one letter should be written by a former employer or supervisor who can attest to the student's work ethic.

Once the Admissions Office receives all required documents, the application will be forwarded to the Graduate Studies Office where it will be sent to the Graduate Exercise Science Advisory Committee. Screening will be ongoing.

ADDITIONAL REQUIREMENTS

In addition to the above general institution admission requirements, students would normally need to meet the following program requirements:

- A baccalaureate degree from an accredited university or college
- A minimum overall grade point average of 3.0
- Score of 1000 or greater on the GRE combined quantitative and verbal portions with a minimum of 400 in each portion
- Completion of two semesters of college-level chemistry and one semester of college-level physics.

Exceptional applicants who do not meet all the above requirements will be considered on an individual basis.

COURSE REQUIREMENTS

- A. Core courses: 15 credit hours
 - EXS 546: Behavior in Sport *or*
 - EXS 649: Motor Learning
 - EXS 555: Physiology of Exercise II
 - EXS 587: Advanced Biomechanics
 - PED 611: Research in Physical Education and Recreation
 - MAT 558: Mathematical Statistics *or*
 - MAT 610: Statistical Tools *or*
 - PSY 508: Interpretation of Advanced Statistical Techniques
- B. Elective courses: 9 credit hours from
 - EXS 535: Neuromuscular Fitness Assessment and Programming
 - EXS 538: Cardiovascular Fitness Assessment and Programming
 - EXS 546: Behavior in Sport
 - EXS 558: Physiological Principles of Conditioning for Sports
 - EXS 565: Perceptual Motor Development
 - EXS 575: Nutritional Aspects of Physical Fitness and Athletic Performance
 - EXS 602: Research Project (approved by advisor)
 - Other graduate courses as approved by the advisor
- C. Thesis: 6 credit hours
 - EXS 650: Master's Thesis

TOTAL CREDIT HOURS REQUIRED: 30

Exercise Science and Sport Studies

GRADUATE COURSES

Athletic Training Course

ATR 521: Contemporary Issues in Athletic Training
(O) Contemporary issues regarding the practice of athletic training will be investigated. Emphasis will be placed on the needs of coaches and athletic personnel who deal with athletes. Additional consideration also will be concerned with the prevention, risk management and the identification and treatment of sport-related injury and illness. (3 cr. hr.)

Exercise Science and Sport Studies Courses

EXS 522: Sport in Contemporary Society
(O) Study of sport from social perspective, investigating the interrelationship of sport to other institutions. Course offers opportunity for critical review of literature in area of sport in society. (3 cr. hr.)

EXS 535: Neuromuscular Fitness Assessment and Programming
(F) Basic understanding of muscle structure, function, and physiology as it applies to strength and power. Review of types of strength

training programs and techniques for developing goal-specific programs will be included. Lectures and laboratory. (3 cr. hr.)

EXS 538: Cardio-Respiratory Fitness Assessment and Programming
(S) Integration of cardiorespiratory physiological concepts into the assessment of an individual's aerobic capacity and the application of these data in designing an effective aerobic exercise program. ACSM guidelines will be followed. Lectures and laboratory. (3 cr. hr.)

EXS 546: Behavior in Sport
(O) Study psychological factors which influence behavior of men and women as they participate in physical activity and sport. (3 cr. hr.)

EXS 551: Philosophy of Sports and Physical Education
(O) Background, development of modern physical education; formulation of scientific principles which foster biological, sociological, and psychological benefits of physical education. (3 cr. hr.)

EXS 555: Physiology of Exercise II
(O) Physiological adaptations, mechanisms of change of function taking place as result of physical exercise. Physiological factors influencing human performance; environmental factors of altitude, space, temperature extremes; drugs and doping; age and gender; related problems in sport medicine. (3 cr. hr.)

EXS 558: Physiological Principles of Conditioning for Sports
(O) Application of physiological principles to development of specific conditioning components. Analysis of research implications and critical evaluation of current practices emphasized. Prerequisites: EXS 397. (3 cr. hr.)

EXS 565: Perceptual Motor Development
(O) Developmental processes from prenatal period to adolescence, with emphasis for elementary physical education. (3 cr. hr.)

EXS 575: Nutritional Aspects of Physical Fitness and Athletic Performance
(O) Application of metabolic and nutritional principles to performance patterns of athletes and individuals desiring to increase their physical fitness capacity. Includes role of carbohydrates, fats, proteins, vitamins, minerals, and water in exercise. Effects of dietary manipulation, fad diets, body composition, and ergogenic aids will be investigated. Prerequisite: EXS 397 or consent of instructor. (3 cr. hr.)

EXS 587: Advanced Biomechanics
(O) Application of fundamental laws of physics. Techniques of physical activities, sports in terms of mechanical principles. Available research reviewed. (3 cr. hr.)

EXS 602: Research Project
(S, M) Guidance, direction in conducting individual research project. Prerequisite: PED 611, consent of advisor. (Also listed as PED 602.) (3 cr. hr.)

EXS 620: History of Sport and Physical Education
(O) Examination of effect selected societies had upon sport and/or physical education from beginning of Western Civilization. (3 cr. hr.)

EXS 622: Seminar in Sociology of Sport
(O) Critical consideration of research, literature and theoretical positions in sociology of sport. Directed student research. Prerequisite: EXS 522. (3 cr. hr.)

EXS 649: Motor Learning
(O) Critical scholarly examination of individual's acquisition of skill in sports. Extensive review of motor learning; research related to skill learning. Application of theoretical areas. (3 cr. hr.)

EXS 650: Master's Thesis
(A, M) Exercise science research. (Also listed as PED 650) (6 cr. hr.)

Health

DEPARTMENT

SCHOOL

Professional Studies

FACULTY

See page 137 for a complete listing.

PROGRAMS OFFERED

Master of Science in Education in Health Education
Master of Science in Teaching in Health Education

The Health Department offers two graduate programs for students interested in pursuing initial or professional New York State Teacher certification. The programs are based on well-developed philosophical and theoretical foundations, reflect national level professional preparation standards, and focus on the development of background, skills and competencies related to sound health education practice. The programs have been designed to meet the needs of students who have undergraduate preparation in health education (M.S. Ed.), for students with a degree in another teacher certification area (M.S.T. tracks A and C), and for students who possess an undergraduate degree outside of teacher education and would like to become certified in health education (M.S.T. track B)

Moffett Center, Room 101
(607) 753-4225
<http://www.cortland.edu/hlth/>

CAREER POTENTIAL

- School health educator
- Health educator in community agencies
- Health educator at college or university level
- Prevention specialist in school and community agencies
- School district health education coordinator

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a graduate degree program, the applicant for enrollment in the Master of Science Education in Health Education and Master of Science in Teaching programs should present the following:

1. Completion of an undergraduate baccalaureate degree
2. A minimum undergraduate cumulative grade point average of 2.8
3. Names, addresses and telephone numbers of three references

Applicants for the M.S.Ed. program should present a copy of current teacher certification in health or documentation that certification requirements have been met.

Students who do not meet the 2.8 entry-level grade point average may be considered for admission at a later date, once they have demonstrated the ability to perform at the graduate level by completing nine credit hours of approved graduate course work and achieving a cumulative grade point average of 3.0 across those credits.

Master of Science in Education**Health Education [HEA]**

This program is designed for students who have completed an undergraduate degree in Health Education and who hold an initial teaching certificate in health.

Professional education courses: 6 credit hours

- EDU 631: Curriculum Construction in Health Education
- EDU 632: Seminar in Health Education

Health courses: 24 credit hours

- HLH 601: Research Methods in Health Education
- HLH 635: School Health Program
- HLH 694: Assessment and Evaluation in Health Education and Health Promotion
- Health and Pedagogy electives (12 cr. hr.)
- Health free elective (3 cr. hr.)

Culminating activity: 0-6 credit hours

- Oral comprehensive exam (0 cr. hr.)
- Master's project (2-3 cr. hr.)
- Thesis (5-6 cr. hr.)

Note: Health free electives may be used to meet all of master's project credit hours or 3 credit hours of thesis requirements.

TOTAL CREDIT HOURS REQUIRED: 30-36

Master of Science in Teaching**Health Education**

The Master of Science in Teaching program is designed for those who do not hold a teaching certificate in health. The three tracks within the degree are designed to allow those with and without teacher certification to pursue health certification. Depending on the academic background of the applicant, there may be additional requirements for the award of the degree (such as anatomy and physiology, and other health content background course work). Any additional requirements are determined on an individual basis after a review of the student's previous course work. This information must be ascertained by the student in consultation with the Health Department's coordinator of graduate studies. It is expected that the student will initiate this consultation early in the program, before the completion of 15 credit hours.

Note: Students who have not previously completed a 3 credit hour course in drug education must take HLH 509 as one of their health electives.

Track A [HEA_CRT]

This program is for those individuals holding an initial teaching certificate in an area other than health education.

Professional education courses: 8 credit hours

- EDU 631: Curriculum Construction in Health Education
- EDU 632: Seminar in Health Education
- EDU 664: Advanced Field Experience in Health Education

Health courses: 27 credit hours

- HLH 601: Research Methods in Health Education
- HLH 694: Assessment and Evaluation in Health Education and Health Promotion
- HLH 635: School Health Program
- HLH 510: Proseminar in Health Foundations
- HLH 530: Family Life Education for the Classroom Teacher *or*
- HLH 630: Human Sexuality *
- Health free electives (12 cr. hr.)

*Students may take both HLH 530 and HLH 630, but must take at least one of these courses.

Culminating activity: 0-6 credit hours

- Oral comprehensive exam (0 cr. hr.)
- Master's project (2-3 cr. hr.)
- Thesis (5-6 cr. hr.)

Note: Health free electives may be used to meet all of master's project or thesis credit requirements.

Additional course work

Students must have completed (as graduates or undergraduates) the following prior to the culminating activity:

- a total of 36 credits of health content course work across undergraduate and graduate courses
- anatomy and physiology (which may be a part of the 36 credits)
- a three-credit course in dealing with alcohol, tobacco and other drugs (which may be a part of the 36 credits)

TOTAL CREDIT HOURS REQUIRED: 35-41

Track B [HEA_NCRT]

This program is for those individuals who do not hold an initial teaching certificate in any area

Professional education courses: 12 credit hours

- EDU 575: Teaching Health Education
- EDU 631: Curriculum Construction in Health Education
- EDU 632: Seminar in Health Education
- Education related elective (3 cr. hr.)

Health courses: 21 credit hours

- HLH 510: Proseminar in Health Foundations
- HLH 601: Research Methods in Health Education
- HLH 635: School Health Program
- HLH 694: Assessment and Evaluation in Health Education and Health Promotion
- HLH 530: Family Life Education for the Classroom Teacher *or*
- HLH 630: Human Sexuality *
- Health free electives (6 cr. hr.)

*Student may take both HLH 530 and HLH 630, but must take at least one of these courses.

Student teaching and field experiences: 11 credit hours

- EDU 664: Advanced Field Experience in Health Education
- EDU 688: Graduate Health Education Seminar
- EDU 689: Graduate Student Teaching in Health Education

Culminating activity: 0-6 credit hours

- Oral comprehensive exam (0 cr. hr.)
- Master's project (2-3 cr. hr.)
- Thesis (5-6 cr. hr.)

Note: "Health Free Electives" may be used to meet all of master's project or thesis credit requirements.

Additional course work

Students must have completed (as graduates or undergraduates) the following prior to the culminating activity:

- a total of 36 credits of health content course work across undergraduate and graduate courses
- anatomy and physiology (which may be a part of the 36 credits)
- a 3 credit course in dealing with alcohol, tobacco and other drugs (which may be a part of the 36 credits)
- Child Abuse Recognition and Reporting workshop
- School Violence Prevention and Intervention workshop
- PSY 331: Psychology of Exceptional Children or equivalent
- general education requirements

TOTAL CREDIT HOURS REQUIRED: 44-50

Track C [HEA_PCRT]

This program is for those physical education students who have an initial certificate and who were accepted into the 4+1 Health Education MST program.

ADMISSION TO THE 4+1 M.S.T. HEALTH EDUCATION PROGRAM

1. Students may apply for this track after they have been accepted into the physical education undergraduate program and have achieved at least sophomore but not more than junior status at the college. At the point of application to the special 4+1 program, the student must have an undergraduate cumulative grade point average of at least 2.7 in order to be accepted.

2. Students accepted into the 4+1 M.S.T. program need to successfully complete the designated health education undergraduate courses and complete their baccalaureate degree with a minimum 2.8 cumulative grade point average. Students accepted into the 4+1 program who graduate from the undergraduate physical education program, who complete the required health course work, and who meet the grade point average criteria will be accepted automatically into the M.S.T. health education program.

Professional education and field experience courses:

8 credit hours

- EDU 631: Curriculum Construction in Health Education
- EDU 632: Seminar in Health Education
- EDU 664: Advanced Field Experience in Health Education

Health courses: 22 credit hours

- HLH 509: Drug Education for Teachers
- HLH 601: Research Methods in Health Education
- HLH 635: School Health Program
- HLH 641: Graduate Readings in Health
- HLH 694: Assessment and Evaluation in Health Education and Health Promotion
- HLH 530: Family Life Education for the Classroom Teacher *or*
- HLH 630: Human Sexuality *

Health free electives (6 cr. hr.)

*Student may take both HLH 530 and HLH 630, but must take at least one of these courses.

Culminating activity: 0-6 credit hours

- Oral comprehensive exam (0 cr. hr.)
- Master's project (2-3 cr. hr.)
- Thesis (5-6 cr. hr.)

Note: Health free electives may be used to meet all of Master's project or thesis credit requirements.

TOTAL CREDIT HOURS REQUIRED: 30-36

Undergraduate 4+1 Health Requirements completed as an undergraduate:

- HLH 110: Personal and Community Health
- HLH 120: Responding to Emergencies *or*
- HLH 220: Safety Education and Emergency Response
- HLH 232: Nutrition
- HLH 302: Human Sexuality Education *or*
- HLH 345: Parenting Education
- HLH 314: Mental Health and Counseling

Health

GRADUATE COURSES

HLH 505: Health and the Media

The course provides an overview and examination of the manner in which health-related topics are covered in different media. Major areas of review are the impact of media portrayals on health-related behavior and the use of media in health education/promotion programs (3 cr. hr.) ■

HLH 509: Drug Education for Teachers

(B) In-depth investigation into all aspects of drug scene for those who will have primary responsibility for drug education. (3 cr. hr.)

HLH 510: Proseminar in Health Foundations

(A) An examination and update of current health content, and pedagogical principles and strategies commonly addressed by school and community health education professionals. Included are such topics as: safety education, including fire/arson prevention, child abduction, abusive or dangerous environments and violence prevention/intervention; wellness and health promotion; factors which impact health, such as culture and socioeconomic level; chronic and communicable disease; weight management and fitness; aging and death; stress management; health care delivery; alcohol, tobacco and other drug prevention/intervention. This course meets all health-related SED requirements except for child abuse reporting and identification, and is linked to the topical areas outlined in the National Health Education Standards and the New York State Standards for Health, Physical Education, and Family and Consumer Science. (3 cr. hr.)

HLH 511: Global Health Problems

(B) Conditions, problems in major geographical areas. Programs of international organizations. (3 cr. hr.) ■

HLH 512: Emotions and Human Behavior

(O) Study of basic content, concepts of humanistic behavior. Emphasis upon investigation, clarification and application of current practices intended to improve emotional health and interpersonal behavior. (3 cr. hr.)

HLH 513: Death, Bereavement and Suicide

(B) Significance of death, with special emphasis on role of health educator in dealing with problems of death, suicide, bereavement. (3 cr. hr.) ■

HLH 514: Workshop in Health Sciences

(O) Workshops in specific health areas with consultants, lecturers from community organizations. Student may register for more than one workshop for two semester hours each. (2 cr. hr.)

HLH 529, 629: Special Topics in Health

Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

HLH 530: Family Life Education and the Classroom Teacher

(B) This course is designed to provide the classroom teacher with the basic skills and overall knowledge necessary to teach in the area of family life, character, sexuality, and parenting education. An examination of teacher preparation, content, curricula, resources and teaching methodology will form the focus of the course. Will meet the SED requirements for child development, parenting education, sexual abuse prevention, and child abduction. (3 cr. hr.)

HLH 535: The Family in Health and Disease

(O) This course will examine the role of the family as a determinant of health and illness behavior of its members throughout the life span. The family's role in health promotion, disease prevention, disease detection, treatment and rehabilitation will be studied. Family involvement in and social support for health behavior change programs will also be addressed. (3 cr. hr.) ■

HLH 540: Moral Problems in Medicine

(O) Discussion of ethical and moral considerations in selected areas of health and medicine. Case studies and readings primarily from medical literature. Prerequisite: Three hours of philosophy or health administration. (Also listed as PHI 540.) (3 cr. hr.)

HLH 542: Health Implications of Family Violence

(O) Will examine health issues related to family violence. Etiological factors related to child abuse and neglect, spousal/partner abuse and elderly abuse will be included. Preventive and interventional community health models and violence-related legislation will be examined. Prerequisites/corequisites: Child abuse certification course; or consent of instructor. (3 cr. hr.) ■

HLH 544: Alternative Medicine

(O) This is an introductory course in alternative, or complementary medical systems. Traditional Chinese medicine, Ayurvedic philosophies and practices, and Mayan medicine will be examined. Historical analysis of the homeopathic and naturopathic medical movements will also be included. (3 cr. hr.) ■

HLH 550: Women's Health

(B) Wide range of topics regarding women's health addressed from personal, institutional and sociocultural perspective. Examination of health problems unique to women, review of some of the political aspects of women's health care, assessment of research needed in the area of women's health included. (3 cr. hr.) ■

HLH 555: Health and Aging

(O) Examination of the aging process with focus on important health issues, problems, concerns. Areas addressed include nutrition, fitness, emotional health, sexuality and health policy. (3 cr. hr.) ■

HLH 557: Seminar in Health Sciences

(O) Studies in depth in specific areas with varied resource people. (3 cr. hr.)

HLH 560: Health and Public Policy

(B) Political aspects of health care delivery in United States; examination of forces affecting development of health policy at various governmental levels. Prerequisite: Course in community health or in American government/politics. (3 cr. hr.) ■

HLH 565: Elementary School Health

(O) Daily observation of pupils, unit development: coordination, integration of teaching and administrative aspects of school health. (3 cr. hr.)

HLH 573: Safety Problems and Programs

(O) Study of accidents, causes and means of prevention. Includes planning for numerous safety programs (home, school, occupational, recreation) with educational, administrative, legal considerations. (3 cr. hr.)

HLH 590: Public Health and the Environment

(B) Explores public health impact of environmental hazards and current issues related to the environment. Important concepts in environmental epidemiology will be presented. Morbidity and mortality associated with environmental pollution will be discussed, using the public health model. Not open to students with credit for HLH 390. (3 cr. hr.) ■

HLH 591: Health, Illness and Sick-role Behaviors

(O) Factors influencing asymptomatic protective behaviors, reactions to disease symptoms, responses to treatment recommendations. (3 cr. hr.)

HLH 592: Current Issues in Community Health

(O) The course is designed to give students an overview of community health issues and practices. Students will explore current health issues, their implications for health promotion and health education practice, and potential resolutions. Current health education and health promotion planning philosophies, models and practices will be discussed. (3 cr. hr.)

HLH 599: Public Health Statistics

(F) Application of statistical methods to public health and health education problems; in-depth review of significant types of public health data, including demographic, mortality, morbidity analysis. (3 cr. hr.)

HLH 601: Research Methods in Health Education

(S) Nature, scope, methodology of research in education with special emphasis on health programs. Prerequisite: MAT 610, HLH 599 or equivalent. (3 cr. hr.)

HLH 603: HIV and AIDS Education

(O) Overview of HIV epidemic. Emphasis on developing comprehensive, high quality HIV education programs. Not open to students with credit for HLH 163. (3 cr. hr.)

HLH 605: Independent Study in Health

(A) Observation, participation in school and/or community health operation accompanied by written summary report; or, written report of library research. (1-3 cr. hr.)

HLH 620: Medical Care Problems and Programs

(O) Major developments, achievements, issues in fast-moving and wide-ranging field of medical care. (3 cr. hr.)

HLH 630: Human Sexuality

(B) The course explores child and adolescent development, including a focus on psychosexual development; an examination of status and trends regarding sexual values, attitudes and behavior patterns in society; issues and approaches related to parenting education and sexuality education. (3 cr. hr.) ■

HLH 635: The School Health Program

(A) This course is designed to provide the health student with the graduate-level responsibilities and competencies necessary to work as a teacher or administrator in the coordinated school health program. An examination of the theoretical and philosophical foundations of health education will be followed by current trends and movements in the profession. The course will focus on the eight component coordinated school health program model and an assessment of the coordinated school health program will be conducted along with the development of recommendations and training for professionals associated with the health program. (3 cr. hr.)

HLH 641: Graduate Readings in Health

(O) In-depth reading, study, discussion of one or more areas in health science content. (2 cr. hr.)

HLH 651: Research Problem in Health Education

(A) Experience with research problems involving formulation, conduct, formal reporting of investigation. (3 cr. hr.)

HLH 652: Master's Thesis — Research in Health Education

(A) (6 cr. hr.)

HLH 694: Assessment and Evaluation in Health Education and Health Promotion

(A) Strategies and techniques for conducting needs assessments and evaluations as part of planning and implementing effective health education and health promotion programs. Grant writing techniques to seek support for conducting needs assessment, program planning, and evaluation activities. (3 cr. hr.)

Related Education Courses

EDU 575: Teaching Health Education

(B) The goal of this course is to prepare the advanced preservice school health educator with the competencies to teach school health education. An examination of school health content, state and national curricula and standards, teaching resources and pedagogy will form the focus of the course. School health observations included. Health education majors only. (3 cr. hr.)

EDU 631: Curriculum Construction in Health Education

(F) Based upon current theories of education applied to school health education. Opportunities to work on individual curriculum problems at any school level. (3 cr. hr.)

EDU 632: Seminar in Health Education

(S) Historical philosophical development of health education with emphasis on status, trends. Theory, methodology utilized in

instruction process for behavior development, change investigated. (3 cr. hr.)

EDU 664: Advanced Field Experience in Health Education

(A) A Seminar-based course for the graduate student seeking initial and professional certification in health education. Observations and assisting in school health education at grades pre-K-6 and 7-12 are included. S,U grades are assigned. Prerequisite: Overall grade point average of 3.0 and permission of department (2 cr. hr.)

EDU 688: Graduate Health Education Seminar

(A) A two-week supervised seminar-based field experience for the graduate student in health education. Involves conducting observations; integrating graduate-level course concepts and understandings; and applying health education curriculum development skills. An overall grade point average of 3.0, completion of health and education course work, and consent of department required. Must be taken in conjunction with EDU 689. (1 cr. hr.)

EDU 689: Graduate Student Teaching in Health Education

(A) Upon successful completion of the 1 credit graduate-level seminar session, the student moves into the college-supervised student teaching experience of 14 weeks. S,U grades are assigned. Prerequisite: Completion of all health and education course work, grade point average 3.0 and permission of department. (8 cr. hr.)

History

DEPARTMENT

SCHOOL

Arts and Sciences

FACULTY

Sanford Gutman (Coordinator)

See page 146 for a complete listing.

PROGRAMS OFFERED

Master of Arts in History

Master of Science in Education in Adolescence Social Studies

CONCENTRATIONS OFFERED

Master of Arts in History: United States, Europe, Non-Western

Master of Science in Education in Adolescence Social Studies: History and Geography

DESCRIPTION

The Masters of Arts in History serves students whose career goals will benefit by a terminal M.A. degree and by those who intend to go on for a Ph.D. in history at another institution. Many of our students who are provisionally certified in teaching secondary social studies also use the M.A. to gain permanent certification. The M.S. in Adolescence Social Studies primarily serves students who wish to get permanent teacher certification.

SPECIAL FEATURES

- History Honor Society
- Small graduate reading and writing seminars
- History Club

Old Main, Room 212

(607) 753-2723

E-mail: raffertyb@cortland.edu

www.cortland.edu/history/

Master of Arts History [HIS]

CAREER POTENTIAL

- Public history (museum, archives)
- Professional schools such as in law or social work
- College history teacher
- Business
- Library science

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program as stated in this catalog, the applicant for enrollment in the program leading to a Master of Arts in History should present the following:

1. Intermediate competency in a foreign language. (This requirement may be met concurrently with graduate study)
2. A minimum of 24 hours of approved undergraduate history courses
3. At least a 3.0 grade point average (on a 4.0 scale) in undergraduate history courses
4. At least a 2.75 grade point average in all undergraduate courses
5. Satisfactory scores on the Graduate Record Examination (GRE)
6. Two letters of recommendation, at least one from a history instructor
7. Approval by the History Department's Graduate Committee

PROGRAM REQUIREMENTS

Students must take a concentration of at least nine hours in United States history, European history, or non-western history (Asia, Africa,

the Middle East, Latin America). The department also requires six hours of course work outside the concentration. In addition to the program requirements stated below students must either write a master's thesis *or* take a written comprehensive exam based on course work and mastery of the content and historical literature in the concentration or in a combination of the concentration and a secondary field. Other requirements for the award of the degree may be determined by the History Department and must be ascertained by the student in consultation with a department graduate advisor.

Required Courses

- HIS 648: History and Philosophy of History: 3 credit hours
- Approved courses in concentration: 9 credit hours
- Seminar in area of concentration: 3 credit hours
- Approved courses outside concentration: 6 credit hours
- Seminar outside area of concentration: 3 credit hours
- Approved electives in history or related field: 6 credit hours

TOTAL CREDIT HOURS REQUIRED: 30

Master of Science in Education

Adolescence Education: Social Studies [SSA]

ADMISSION AND PROGRAM REQUIREMENTS

See Social Studies: Adolescence Education on page 296 of this catalog.

History

GRADUATE COURSES

HIS 524: Issues in 19th-Century U.S. History

(C) Historical study of major issues in 19th-century American history with special attention to teaching materials and approaches. (3 cr. hr.)

HIS 528: Issues in the U.S. Civil Rights Movement

(C) Origins, ideologies, activities, results, and historiographical interpretations of movement to obtain civil and political rights for African Americans, 1945-1975. (3 cr. hr.)

HIS 529, 629: Special Topics in History

(C) Selected topics. May be taken more than once as subtitle changes. Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

HIS 530: Issues in African-American History

(C) Major historical arguments and historiographical issues in African American history from African origins to the present: origins and nature of slavery, rise of Jim Crow South, urban ghetto formation, civil rights movement. Special attention to teaching materials and methods. Prerequisites: Twelve hours of undergraduate or graduate work in American history, or permission of instructor. (3 cr. hr.)

HIS 531: Issues in African History

(C) Historical and historiographical survey of peoples of Africa—human origins, population movements, spread of Islam, slave trade, colonialism, independence and underdevelopment. Special attention to teaching methods and materials. Prerequisites: At least twelve hours of course work in social studies on the graduate or undergraduate level. (3 cr. hr.)

HIS 532: Issues in European History since 1500

(C) Historical and historiographical study of major themes in Europe since 1500. Special attention given to teaching materials and methods. (3 cr. hr.)

HIS 533: Issues in Asian History

(C) Historical and historiographical study of selected countries of Asia. Main themes include diversity in the past and present; continuity and change in Asian civilizations; Asia in world history; colonialism and nationalism; economic, political and social developments; and modernization and Asian identity. Special attention given to teaching materials and methods. (3 cr. hr.)

HIS 538: Teaching About Nazi Germany and the Holocaust

(C) In-depth study of Nazi Germany and Holocaust with special attention to pedagogical strategies. Prerequisite: 12 hours of history and student teaching or permission of instructor. (3 cr. hr.)

HIS 545: Issues in Women's History

(C) Major issues in the history of women in the United States with special attention to pedagogical strategies and materials. (3 cr. hr.)

Note: Prerequisites for all history courses at the 600 level are 12 semester hours in history above the 200 level or consent of the department.

HIS 645: Law and Society in Russia and the Soviet Union

(G) History and historiography of major issues in Russia and Soviet Union: An intensive examination of how law and social development have interacted historically in Russia and the U.S.S.R. Prerequisite: bachelor's degree in history/social studies. (3 cr. hr.)

HIS 646: Issues in American Labor and Working-Class History

(G) This course is designed to introduce graduate students to the historiography of American working-class history, which is broadly defined as the historical experience of wage-earning people. Although the course will move chronologically, it is not meant to be a survey but rather to highlight particular issues in the field. (3 cr. hr.)

HIS 648: History and Philosophy of History

(C) Historiographical survey of theories of selected theoreticians (Vico, Hegel, Marx, Ranke, etc.) on such problems as divinity, humanity, freedom, human understanding, historical understanding. (3 cr. hr.)

HIS 650: Readings in History

(A) Individual study in selected areas of history at the graduate level. Prerequisite: Consent of department. (3 cr. hr.)

HIS 660: Seminar in American History

(A) Directed research in depth in certain areas of American history. Open only to M.A. candidates in history and M.S. Ed. candidates in social studies. (3 cr. hr.)

HIS 661: Seminar in European History

(A) Directed research in depth in certain areas of European history. Open only to M.A. candidates in history and M.S. Ed. candidates in social studies. (3 cr. hr.)

HIS 662: Seminar in Russian History

(A) Directed research in depth in certain areas of Russian history. Open only to M.A. candidates in history and M.S. Ed. candidates in social studies. (3 cr. hr.)

HIS 663: Seminar in Latin American History

(C) Directed research in depth in certain areas of Latin American history. Open only to M.A. candidates in history and M.S. Ed. candidates in social studies. (3 cr. hr.)

HIS 664: Seminar in African History

(C) Directed research in depth in certain areas of African history. Open only to M.A. candidates in history and M.S. Ed. candidates in social studies. (3 cr. hr.)

International Communications and Culture

Old Main, Room 228
(607) 753-4303
E-mail: icc@cortland.edu
www.cortland.edu/icc/

DEPARTMENT

SCHOOL

Arts and Sciences

FACULTY

See page 159 for a complete listing.

PROGRAMS OFFERED

Master of Science in Education in Second Language Education

Master of Science in Education in Adolescence Education:

Language Other than English — French (7-12)

Master of Science in Education

Second Language Education:

English as a Second Language [SLED_ESL]

French [SLED_FRE]

Spanish [SLED_SPA]

The M.S.Ed. in Second Language Education develops linguistic and analytic skills, knowledge of the field, cultural awareness, and pedagogical background leading to permanent/professional certification for English as a Second Language (K-12), French (7-12), or Spanish (7-12) in New York State.

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, the applicant for enrollment in the program leading to a M.S.Ed. in Second Language Education: English as a Second Language (K-12), French (7-12), or Spanish (7-12) should present the following:

- baccalaureate grade point average of 2.5 or higher
- passing score on the Liberal Arts and Sciences Test (LAST) and the Assessment of Teaching Skills - Written (ATS-W)
- undergraduate concentration (liberal arts or secondary education) in English, English as a second language, French, Spanish, or an approved related field
- provisional certification at the secondary level for French and Spanish tracks

PROGRAM REQUIREMENTS

Core Courses: 15 credit hours

An advanced course in the philosophical or social foundations of education (EDU 671, 673, or 675)

EDU 637: Seminar in the Teaching of Secondary Foreign Languages

ICC 623: Second Language Acquisition

ICC 621: Linguistics for Foreign Language Educators

ICC 523: Integrating Technology in the Foreign Language Classroom

Specialized Courses: English as a Second Language:
15-27 credit hours

ENG 600: Advanced Grammar and Usage, *or*

ENG 601: History of the English Language

ICC 620: Materials and Techniques for Teachers of ESL for Mathematics, Science, and Social Science

ICC 622: Theory and Practice of Bilingual/Multicultural Education

ICC 624: Methods of Teaching English to Speakers of Other Languages

Program-related elective

ICC 626: ESL Student Teaching (where necessary)

French: 15 credit hours

FRE 504

FRE 506

Two graduate-level courses in French literature

Program-related elective

Spanish: 15 credit hours

SPA 604

SPA 606

One graduate-level course in Spanish Peninsular literature

One graduate-level course in Latin American literature

Program-related elective

Other Requirements

Graduate grade point average of 3.0 in the program

Passing score on Content Specialty Test (CST) for French or Spanish

Passing score on English Proficiency Tests for ESL

Passing score on a comprehensive examination (local or state mandated)

Successful presentation of a portfolio

TOTAL CREDIT HOURS REQUIRED: 30-42

Master of Science in Education

Adolescence Education: Language Other than English — French (7-12) [AFR]

The M.S.Ed. in French develops linguistic and analytical skills, knowledge of the field, cultural awareness, and pedagogical background leading to permanent/professional certification for French in New York State.

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program as stated in this catalog, the applicant for enrollment in the program leading to a Master of Science in Education in Adolescence Education: French (7-12) should present the following:

1. Evidence of a bachelor's degree from an accredited college
2. Documentation of an initial/provisional certificate (or a certificate of qualification for initial or provisional certification) in French issued by the New York State Education Department
3. An overall undergraduate grade point average of at least 2.5

PROGRAM REQUIREMENTS

A minimum of 30 credit hours of approved course work at the graduate level as described hereafter is required for the master of science in education in French degree.

A. Professional Education: 6 credit hours

EDU 637: Seminar in the Teaching of Secondary Foreign Languages

A course in the historical, philosophical, social or psychological foundations of education

- B. French: 18 hours
 French Poetry
 French Fiction
 French Theater
 Electives in French (9 credit hours)
 (No more than four credit hours may be completed as independent study)

- C. Electives: 6 credit hours
 D. Comprehensive examination

TOTAL CREDIT HOURS REQUIRED: 30

Note: See requirements for graduate admission and admission to candidacy on pages 244-247.

International Communications and Culture

GRADUATE COURSES

General Courses

ICC 523: Integrating Technology in the Foreign Language Classroom
 (C) Focus on learning how to use communications technologies and develop related foreign language materials with an emphasis on pedagogically sound integration of these technologies and materials in the foreign language curriculum. Technologies to be explored include: presentation software, interactive multimedia, the World Wide Web, and real-time communication. Prerequisites: Graduate status or permission of department. (3 cr. hr.)

ICC 620: Materials and Techniques for Teachers of English as a Second Language Through Mathematics, Science and Social Studies Content Areas

(C) Materials and techniques for the teaching of English to speakers of other languages through mathematics, science and social studies content areas. Application of theories of second-language acquisition and pedagogy to the teaching of English as a second language in these areas. (3 cr. hr.)

ICC 621: Linguistics for Second Language Educators
 (C) Overview of the study of linguistics. Focus on descriptive linguistics (phonetics, phonology, syntax, and semantics) and the study of language use as a social and symbolic action. Prerequisite: Graduate status. (3 cr. hr.)

ICC 622: Theory and Practice of Bilingual/Multicultural Education
 (C) Provides a foundation in the historical, sociopolitical, linguistic, and educational issues related to bilingual and multicultural education. Students develop a basic understanding of language and cultural diversity including aspects of sociolinguistics and multicultural education and learn specifically about social and pedagogical issues regarding bilingual and total immersion curricula in the United States. (3 cr. hr.)

ICC 623: Second Language Acquisition: Theory and Research
 (C) Examination of theories of second language acquisition (SLA): their definitions and how they attempt to describe and explain learner language. Investigation of relationship between theory of SLA and foreign language classroom instruction. Explanation of research methodologies employed in SLA. (3 cr. hr.)

ICC 624: Methods of Teaching English to Speakers of Other Languages

(G) Methods of teaching reading, writing, speaking, and communicating in English to speakers of other languages. Application of theories of second language acquisition and pedagogy to the teaching of English as a second language. Prerequisite: Graduate status. (3 cr. hr.)

ICC 625: The Teaching of Foreign Languages in the Elementary School
 (O) Appropriate psychology, rationale, current research and statistics as well as methodologies in order to create successful foreign language teaching/learning experiences in the elementary school. Course is approved by the New York State Education Department for extension of foreign language 7-12 certification to foreign language K-12. Prerequisites: One year of full-time teaching of foreign languages, provisional certification. (3 cr. hr.)

ICC 626: Student Teaching, K-12, English as a Second Language
 (A) Full-time supervised student teaching in an approved elementary and secondary placement for students in the Master's of Science in Second Language Education. Prerequisite: Graduate standing and permission of department. (12 cr. hr.)

ICC 627: Teaching Reading in the Second Language Context
 (C) Provides a theoretical and practical grasp of several current views of first and second language reading; investigates diagnostic techniques which can be used to identify strategies of non-native readers, and examines materials, teaching methods, and testing procedures used in foreign language and ESL classrooms. Prerequisite: Graduate status. (3 cr. hr.)

French Courses

FRE 503: Advanced Grammatical Structure of French
 (O) Advanced work in French stylistics; special problems in morphology, grammar and syntax of present-day French, oral and written. (3 cr. hr.)

FRE 504: Teaching French Civilization
 (O) France and the modern Francophone world. In-depth study of various aspects of French and Francophone civilization, with particular focus on the development and integration of materials for use in the public school classroom. (3 cr. hr.)

FRE 505: Techniques of Translating French
 (O) Career-orientated translation training: film dubbing, simultaneous translation, commercial translation, etc. May be repeated as subtitle changes. (3 cr. hr.)

FRE 506: Teaching French Literature
 (O) In-depth study of selected texts from French and Francophone literature, with particular focus on the development and integration of materials for use in the public school classroom. Prerequisites: Two literature courses at the 300 or 400 level. (3 cr. hr.)

FRE 515: Seminar in Literature
 (O) Topics defined by subtitle. Knowledge of French required. Major texts read in French even when topic in comparative literature is presented. (3 cr. hr.)

FRE 517: Independent Study
 (O) Individual supervised study. May be repeated; no more than six semester hours may be credited toward degree. Prerequisite: Two semesters of 300-level courses, consent of department. (1-3 cr. hr.)

FRE 529, 629: Special Topics in French
 Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

FRE 601: French Poetry

(O) Significant author or movement. May be repeated as subtitle changes. (3 cr. hr.)

FRE 602: French Fiction

(O) Significant author or school. May be repeated as subtitle changes. (3 cr. hr.)

FRE 603: French Theatre

(O) Specific dramatic author or theatre movement. May be repeated as subtitle changes. (3 cr. hr.)

FRE 609: Independent Study

(O) Independent work under direction of student's major advisor. May be repeated as subtitle changes. (3 cr. hr.)

Spanish Courses**SPA 529, 629: Special Topics in Spanish**

Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

SPA 503: The Grammatical Structure of Spanish

(O) Phonology, morphology, syntax of present day standard Spanish. Prerequisite: SPA 306. (3 cr. hr.) ■

SPA 517: Independent Study

(O) Individual supervised study. May be repeated; no more than six semester hours may be credited toward degree. Prerequisite: Two semesters of 300-level courses. (1-3 cr. hr.)

SPA 604: Teaching Hispanic Civilization

(C) Spain and Spanish America. In-depth study of various aspects of Spanish and Spanish American civilization, with particular focus on the development and integration of materials for use in the public school classroom. Prerequisite: Competency in Spanish. (3 cr. hr.)

SPA 606: Teaching Spanish Literature

(O) Study of second language reading research and extensive attention to pedagogical framework of teaching reading in a second language. Particular emphasis on the development of materials for classroom use by focusing on selected texts from Spanish and Spanish American literature. Prerequisite: Competency in Spanish. (3 cr. hr.)

SPA 615: Seminar in Spanish Peninsular Literature

(C) Topics in Spanish peninsular literature defined by subtitle. Knowledge of Spanish required. Major texts read in Spanish. May be retaken as subtitle changes. Prerequisite: Competency in Spanish. (3 cr. hr.)

SPA 616: Seminar in Latin American Literature

(C) Topics in Latin/Spanish American literature defined by subtitle. Knowledge of Spanish required. Major texts read in Spanish. May be retaken a subtitle change. (3 cr. hr.)

Education Courses**EDU 637: Seminar in Methods of Second Language Teaching**

(G) Methods of teaching all skill areas in second languages (reading, writing, speaking, listening, culture); curriculum patterns, practices, research in second language teaching. Prerequisite: One year of full-time teaching of foreign languages, provisional certification. (3 cr. hr.)

Graduate Courses

LIBERAL ARTS OFFERINGS

SEE OTHER GRADUATE COURSE LISTINGS WITH MASTER'S DEGREE PROGRAMS ON THE PRECEDING PAGES

African American Studies

AAS 529: Special Topics in African American Studies

Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

AAS 581: Issues in African American Education

(C) Relationship of education to the African American experiences. Current topics viewed from African American perspective. Prerequisites: Senior-level African American studies major and minors. Open to senior-level education majors and minors, and graduate students. (3 cr. hr.)

AAS 590: Seminar in African Politics and Society

(O) Comparative, analytical study of African sociocultural and political systems, governmental processes of new African nations. Open to seniors with six hours of appropriate coursework or graduate students. (3 cr. hr.)

AAS 591: Current Issues and Problems in African American Politics

(O) Emphasis on African American opinion leaders and process of articulating, aggregating, implementing African American sociopolitical opinions and issues into public policy. Examples, comparisons drawn from African, other African American World situations. Open to seniors with six hours of appropriate coursework or graduate students. (3 cr. hr.)

Anthropology

ANT 529, 629: Special Topics in Anthropology

Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

ANT 550: Independent Study in Anthropology

(A) Prerequisites: Twelve hours of general anthropology including ANT 102 and ANT 300; consent of department. (3 cr. hr.)

ANT 600: Field Work in Archeology

(I) Combination field and laboratory study of one or more archaeological sites. Prerequisite: Permission of department chair or director of archaeological program. (3-6 cr. hr.)

Art and Art History

ATH 529, 629: Special Topics in Art and Art History

Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.) WI

ATS 529, 629: Special Topics in Studio Art

Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

ATT 529, 629: Special Topics in Art Theory

Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

Communication Studies

COM 529, 629: Special Topics in Communication Studies
Selected topics. May be taken more than once as subtitle changes.
Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

COM 590: Advanced Independent Study in Communication Studies
(O) Faculty-supervised individual study of a specific topic in any communication studies area. May be taken more than once for a maximum of six hours. Prerequisite: COM 100, consent of department. (1-6 cr. hr.)

Computer Applications

CAP 529, 629: Special Topics in Computer Applications
Selected topics. May be taken more than once as subtitle changes.
Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

Computer Science/Mathematics

MCS 584: Topics in Computer Science
(O) Topics from areas of common interest to instructor, students. May be repeated as subtitle changes. Prerequisite: Consent of department. (3 cr. hr.)

Economics

ECO 501: Workshop in Economics
(O) Discussion of economic problems with special attention to needs of social science teachers. Prerequisite: Consent of department. (3 cr. hr.) ■

Environmental Studies

EST 529: Special Topics in Environmental Studies
Selected topics. May be taken more than once as subtitle changes.
Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

Geography

GRY 520: Maps in the Classroom
(B) Classroom-laboratory approach to map use for students and teachers. Formal study of map elements. Map reading, interpretation. Classroom map exercises, their design, use. (3 cr. hr.)

GRY 529: Special Topics in Geography
Selected topics. May be taken more than once as subtitle changes.
Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

GRY 595: Independent Study in Geography
(O) Independent research in selected geographic problems.
Prerequisite: Consent of instructor. (3 cr. hr.)

GRY 640: Seminar in Geographic Techniques
(O) Intensive work in geographic techniques. Prerequisite: Nine hours of geography. May be repeated for credit with departmental approval. (3 cr. hr.)

International Studies

IST 529, 629: Special Topics in International Studies
Selected topics. May be taken more than once as subtitle changes.
Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

Performing Arts

MUS 529, 629: Special Topics in Music
Selected topics. May be taken more than once as subtitle changes.
Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

MUS 521: Music in Western Civilization
(O) Historical perspective from Ancient Greece to modern times; relationship to other fine arts and interpreted within framework of cultural, intellectual history. Prerequisite: MUS 100, 221, 222, or 223. (3 cr. hr.) ■

MUS 522: Music in the United States
(O) Pilgrim times to present, emphasizing development of distinctive American tradition in music. Prerequisite: MUS 100, 221, 222, or 223. (3 cr. hr.) ■

MUS 523: Traditions and Trends in African American Music
(O) A general survey of African American Music, tracing the origin from colonial music of the 17th Century to rap music of the present. (3 cr. hr.)

THT 529, 629: Special Topics in Theatre
Selected topics. May be taken more than once a subtitle changes.
Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

THT 542: Puppetry For Educators
A survey of the history and techniques of puppet performance which emphasizes the cross cultural relevance of puppets and the status of puppetry as a performing art, as well as its relationship to various narrative traditions. Individual (graduate level) research projects will examine puppetry within a pedagogical frame that targets specific content areas and suggests strategies for using puppets in a variety of ways with particular grade levels. Practicum. (3 cr. hr.)

Philosophy

PHI 529, 629: Special Topics in Philosophy
Selected topics. May be taken more than once as subtitle changes.
Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

PHI 540: Moral Problems Medicine
(S) Discussion of ethical and moral considerations in selected areas of health and medicine. Case studies and readings primarily from medical literature. Prerequisite: Three hours of philosophy or three hours of health administration. (Also listed as HLH 540.) (3 cr. hr.)

PHI 675: Philosophical Issues in Education
(O) A study of issues in education in relation to broader philosophical conceptions of nature, knowledge, the individual and society. Topics include role of education for social structure, individual freedom and development, empowerment, social progress. Philosophers studied include Plato, Rousseau, Dewey, Freire. (Also listed as EDU 675.) (3 cr. hr.)

Political Science

POL 500: Seminar in American Government and Politics
(O) Selected legislative, administrative, judicial aspects of public policy. May be repeated for credit when topic changes. Prerequisite: Nine hours of social science. (3 cr. hr.)

POL 523: The United States Constitution and Its Interpretation
(F) Structure, historical development of United States Constitution: currently discussed constitutional interpretations, controversies arising from such discussion. Prerequisite: Nine hours of social science. (3 cr. hr.)

POL 524: Courts, Judges and Politics

(O) Judicial interpretation as policy formulation in context of political process. Prerequisite: Nine hours of social science. (3 cr. hr.)

POL 526: Seminar in State and Local Government

(O) Selected topics, problems in state and local government. May be repeated with change of subtitle. Prerequisites: Nine hours of social science, consent of department. (3 cr. hr.)

POL 529, 629: Special Topics in Political Science

Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

POL 530: American Political Parties and Pressure Groups

(O) Organization, tactics, dynamics and roles. Prerequisite: Nine hours of social science. (3 cr. hr.)

POL 550: Seminar in International Relations

(O) Selected problems in international relations. May be repeated for credit when topic changes. Prerequisite: Nine hours of social science. (3 cr. hr.)

POL 560: Seminar in Comparative Politics

(O) Selected problems of comparative politics. May be repeated for credit when topic changes. Prerequisite: Nine hours of social science. (3 cr. hr.)

POL 570: Seminar in Political Theory

(O) Selected topics in political science. May be repeated for credit when topic changes. Prerequisite: Nine hours of social science. (3 cr. hr.)

POL 592: Seminar in Politics

(O) Selected problems in politics. May be repeated for credit with change of subtitle. Prerequisite: Nine hours of social science. (3 cr. hr.)

POL 593: Readings in Political Science

(O) Individual readings in selected topics. May be repeated for credit with change in topic. Prerequisites: Nine hours of social science, consent of department. (3 cr. hr.)

Psychology

PSY 500: Advanced Child Psychology

(B) Advanced study of principles of child behavior, development. Prerequisite: Prerequisite: PSY 231, 232, 332 or 333. (3 cr. hr.)

PSY 501: Advanced Educational Psychology

(B) Advanced study of psychological principles, theories related to education. Prerequisite: Prerequisite: PSY 231, 232, 332 or 333. (3 cr. hr.)

PSY 505: History and Systems of Psychology

(B) Historical evaluation of theoretical concepts, issues in systematic psychology from 1700 to 1950. Prerequisites: Twelve hours in psychology, consent of department. (3 cr. hr.)

PSY 507: Statistical Designs for Experimentation

(B) Advanced statistical methods, experimental designs appropriate to univariate, multivariate problems. Prerequisite: PSY 201. (3 cr. hr.)

PSY 508: Interpretation of Advanced Statistical Techniques

(O) Interpretation of univariate and multivariate statistical techniques used in applied research; analysis of variance, multivariate analyses, nonparametric tests and test construction statistics included. Prerequisite: PSY 507. (3 cr. hr.)

PSY 509: Advanced Laboratory Methods

(B) Laboratory experience in conducting research; experimental design, apparatus construction, data analysis, reporting of results. Prerequisites: PSY 202 or 203. (3 cr. hr.)

PSY 510: Applied Research Methods

(O) Methods of empirical research for applied settings, including hypothesis formation, data collection, data interpretation and reporting of results. Prerequisite: PSY 202. (3 cr. hr.)

PSY 511: Advanced Motivation

(B) Advanced study of motivation as psychological construct in contemporary theories. Prerequisite: PSY 311. (3 cr. hr.)

PSY 512: Advanced Learning

(B) Advanced study of post-1950 theoretical, methodological approaches to learning emphasizing operant conditioning, mathematical models, hypothetico-deductive systems. Prerequisite: PSY 312. (3 cr. hr.)

PSY 513: Advanced Theories of Sensory and Perceptual Processes

(B) Advanced study of contemporary problems, issues, theories related to sensory, perceptual processes. Prerequisite: PSY 412. (3 cr. hr.)

PSY 514: Advanced Physiological Psychology

(O) Detailed analysis of anatomical, neurophysiological, biochemical correlates of selected behavior. Prerequisite: PSY 411. (3 cr. hr.)

PSY 516: Psychological Foundations of Education

(O) Theories, data, principles of psychology applied to classroom. Open only to graduate students not having child, adolescent, developmental or educational psychology. Prerequisite: Three hours of psychology. (3 cr. hr.)

PSY 529, 629: Special Topics In Psychology

Selected topics. May be taken more than once as subtitle changes. Prerequisite: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

PSY 532: Advanced Adolescent Psychology

(B) Advanced study of adolescent behavior, development. Prerequisite: PSY 231 or 232 or 332 or 333 or 516. (3 cr. hr.)

PSY 533: Advanced Developmental Psychology

(B) Advanced study of the developmental processes from childhood through adulthood. Emphasis on developmental changes in cognitive, personality and social processes. Prerequisites: PSY 101 and at least one of PSY 231, 232, 332, 333 or 334. (3 cr. hr.)

PSY 605: The Exceptional Child

(O) Examination of current research literature, selected psychological theories related to exceptional children. Prerequisites: PSY 500 or 532. (3 cr. hr.)

PSY 682: Seminar in Experimental Psychology

(O) Critical review of literature on current theoretical issues in experimental psychology. Prerequisites: PSY 507 and 511, 512, or 513. (3 cr. hr.)

PSY 683: Seminar in Contemporary Psychology

(O) Critical review of literature on theoretical issues, problems in selected area of contemporary psychology; developmental, educational, clinical or social psychology. Prerequisite: Six hours of psychology at graduate level. (3 cr. hr.)

PSY 690: Independent Study in Psychology

(O) Individual study and/or research. Written report required. May be repeated under different title. Maximum of three credit hours may be applied as elective credit in the M.A. or M.S. degree program in psychology. Prerequisites: Six graduate credit hours in psychology, consent of department. (1-3 cr. hr.)

PSY 695: Master's Thesis in Psychology

(A) Investigation, under supervision of a member of department, of significant problem in contemporary psychology. Final written report to be submitted to Division of Graduate and Continuing Education. Prerequisite: Consent of department. (6 cr. hr.)

Sociology

SOC 529, 629: Special Topics in Sociology
Selected topics. May be taken more than once as subtitle changes.
Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

SOC 596: Independent Study in Sociology
(A) Individual study in selected areas. Prerequisites: Fifteen hours of sociology, consent of department. (3-8 cr. hr.)

SOC 601: Issues in Criminology
(O) Selected topics in criminology. May be repeated as subtitle changes. Prerequisite: Three hours of sociology. (3 cr. hr.)

Mathematics

DEPARTMENT

SCHOOL

Arts and Sciences

FACULTY

See page 173 for a complete listing.

PROGRAMS OFFERED

Master of Arts in Teaching in Adolescence Education: Mathematics

Master of Science in Education in Adolescence Education:
Mathematics

Master of Science in Education in Adolescence Education:
Physics and Mathematics

Master of Arts in Teaching

Adolescence Education: Mathematics [AEM]

This program leads to the M.A.T. degree as well as initial or provisional certification for teaching adolescence mathematics. The focus of the program is to provide a pedagogical foundation that complements a solid mathematical background.

CAREER POTENTIAL

- Mathematics teacher, high school or junior high school
- Curriculum coordinator
- Educational administrator

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, the applicant for enrollment in the program leading to a Master of Arts in Teaching Adolescence Education: Mathematics (7-12) should present the following:

1. Official transcripts documenting a bachelor's degree from an accredited college or university
2. A minimum of 30 credit hours of approved mathematics courses at the Calculus I level and above
3. An overall undergraduate grade point average of at least 2.5
4. Two letters of recommendation from professors or professional colleagues that address the prospective student's suitability for adolescence school teaching
5. Application to the SUNY Cortland Teacher Education Program
6. Demonstrated proficiency equivalent to successful completion of the second semester (102) of a college-level foreign language sequence.

SOC 602: Studies in Community

(O) Selected topics in community. May be repeated as subtitle changes. Prerequisite: Three hours of sociology. (3 cr. hr.)

Speech Pathology and Audiology

SHH 529: Special Topics in Speech Pathology and Audiology
Selected topics. May be taken more than once as subtitle changes.
Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

Moffett Center, Room 129

(607) 753-4326

E-mail: math@cortland.edu

<http://www.cortland.edu/math/main.html>

PROGRAM REQUIREMENTS

- A. Required Core in Mathematics: 12 credit hours
 - * MAT 501: Fundamental Concepts of Mathematics
 - * MAT 502: Applied Concepts in Adolescence Mathematics
 - MAT 603: Real Analysis and Concepts of Calculus
 - MAT 604: Algebraic Structures II
- B. Required Core in Professional Preparation: 36 credit hours
 - * AED 540: Technologies in the Adolescence Mathematics Classroom
 - * EDU 600: The Secondary School
 - * AED 601: Teaching Adolescence Mathematics
 - * EDU 549: Reading in the Secondary School
 - * EDU 661: Language Development in Adolescents for Non-Literature Majors
 - HLH 510: Proseminar in Health Foundations
 - EDU 671: Issues in Foundations of Education

One of the following two courses:
 PSY 501: Advanced Educational Psychology *or*
 PSY 533: Advanced Developmental Psychology

 - AED 692: Field Experiences in Mathematics Teaching
 - AED 693: Student Teaching – Adolescence Mathematics I
 - AED 694: Student Teaching – Adolescence Mathematics II

* *Must be taken prior to student teaching.*
- C. Additional Requirements
 1. Successful completion of either a comprehensive examination covering the material from the required core in mathematics or a graduate project that contributes to the value of mathematics or mathematics education.
 2. Specific requirements for New York State teaching certification (state examinations, identification and reporting of child abuse and maltreatment, alcohol and drug abuse education, school violence prevention education, fingerprinting, and foreign language requirements) can be found on page 248 in this catalog.

TOTAL CREDIT HOURS REQUIRED: 48

Master of Science in Education

Adolescence Education: Mathematics [AEM]

This program leads to the M.S.Ed. and is intended for in-service teachers seeking a professional certificate in adolescence mathematics. The focus of the program is to provide greater subject depth and additional instructional methodologies.

CAREER POTENTIAL

- Mathematics teacher, high school, junior high school, or middle school
- Curriculum coordinator
- Educational administrator

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, the applicant for enrollment in the program leading to a Master of Science in Education in Adolescence Education: Mathematics (7-12) should present the following:

1. Documentation of an initial/provisional certificate (or a certificate of qualification for initial or provisional certification) in adolescence/secondary mathematics education issued by the New York State Education Department
2. An overall undergraduate grade point average of at least 2.5 in mathematics
3. An overall undergraduate grade point average of at least 2.5
4. Two letters of recommendation from professors or professional colleagues that address the prospective student's suitability for adolescence school teaching

PROGRAM REQUIREMENTS

- A. Required Core in Mathematics: 12 credit hours
 MAT 501: Fundamental Concepts of Mathematics
 MAT 502: Applied Concepts in Adolescence Mathematics
 MAT 603: Real Analysis and Concepts of Calculus
 MAT 604: Algebraic Structures II
- B. Required Core in Professional Preparation: 12 credit hours
 AED 540: Technologies in the Adolescence Mathematics Classroom
 EDU 642: Seminar in Teaching Adolescence Mathematics
 EDU 671: Issues in Foundations of Education
- Complete one of the following:
 PSY 501: Advanced Educational Psychology
 PSY 533: Advanced Developmental Psychology

Note: Students who desire middle school extension certification must complete PSY 533.

- C. Electives: 6 credit hours
1. Students elect three credit hours from MAT 500 or MAT 600 numbered courses.
 2. Students elect three credit hours from other mathematics, education, or psychology graduate courses.

Note: Students who desire middle school extension certification must complete EDU 533: Introduction to Middle Childhood Education.

D. Additional Requirements

1. Successful completion of either a comprehensive examination covering the material from the required core in mathematics or a graduate project that contributes to the value of mathematics or mathematics education.
2. Specific requirements for New York State teaching certification (state examinations, identification and reporting of child abuse and maltreatment, alcohol and drug abuse education, school violence prevention education, fingerprinting, and foreign language requirements) can be found in the catalog.

TOTAL CREDIT HOURS REQUIRED: 30 HOURS

Master of Science in Education

Adolescence Education: Physics and Mathematics (7-12) [AEM]

CAREER POTENTIAL

- Teacher: physics and mathematics (grades 7-12)
- Science department chair

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, the applicant for enrollment in the program leading to a M.S.Ed. in Adolescence Education: Physics and Mathematics (7-12) should present the following:

1. All undergraduate transcripts which reflect evidence of completion of a bachelor's degree in physics/mathematics or functionally related subject area. The transcript needs to show at least 30 credit hours of course work in physics and at least 30 credit hours of course work in mathematics.
2. Documentation of an initial/provisional certificate (or a certificate of qualification for initial or provisional certification) in physics and mathematics issued by the New York State Education Department
3. An overall undergraduate grade point average of at least 2.5
4. Three letters of recommendation from former professors or professional colleagues who can speak to the candidate's preparation and competence for teaching physics/mathematics in grades 7-12
4. Interview with the coordinator of adolescence education - science (7-12)

PROGRAM REQUIREMENTS

- A. Content: 24 credit hours in physics and mathematics
 12 credit hours in graduate physics
 12 credit hours in graduate mathematics
- B. Pedagogy: 3-6 credit hours
- Option I: Without middle childhood extension
 AED 540: Technologies in the Adolescence Mathematics Classroom
- Option II: Leads to a middle childhood extension of certificate for grades 5-6
 EDU 533: Introduction to Middle Childhood Education
 PSY 533: Advanced Developmental Psychology
- C. Culminating Master's Project: 3 credit hours
 SCI 690: Independent Study in Science/Mathematics Education

TOTAL CREDIT HOURS REQUIRED: 30-33

Middle Childhood Extension (Gr 5-6)**[AEM_MCHD]**

Students electing to take the Middle Childhood Extension may do so by completing six additional credits in middle childhood education:

- PSY 533: Advanced Developmental Psychology and
- EDU 533: Introduction to Middle Childhood Education.

Mathematics

GRADUATE COURSES

MCS 584: Topics in Computer Science

(O) Topics from areas of common interest to instructor, students. May be repeated as subtitle changes. Prerequisite: Consent of department. (3 cr. hr.)

MAT 501: Fundamental Concepts of Mathematics

(F, M) Logic, sets, mathematical systems, relations, and techniques of proof. Prerequisite: Consent of department. (3 cr. hr.)

MAT 502: Applied Concepts in Adolescence Mathematics

(M, S) Applications and extensions of concepts basic to secondary school mathematics. Topics discussed include Greek mathematics; Euclidean, hyperbolic and spherical geometries; number theory and fractals. Real world applications of the aforementioned topics will be a major component of the course. Prerequisite: Consent of department. (3 cr. hr.)

MAT 529, 629: Special Topics in Mathematics

Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

MAT 537: Complex Analysis

(O) Introduction to integration, differentiation, series expansion of complex functions. Prerequisite: MAT 501. (3 cr. hr.)

MAT 558: Mathematical Statistics

(O) Selected topics in mathematical statistics. Prerequisite: MAT 501. (3 cr. hr.)

MAT 567: Topology I

(O) Basic concepts; point-set topology, metric spaces, topological spaces, connectedness, compactness. Prerequisite: MAT 501. (3 cr. hr.)

MAT 603: Real Analysis and Concepts of Calculus

(C) Properties of functions of a real variable that relate to fundamental concepts of differential and integral calculus. Prerequisite: MAT 501. (3 cr. hr.)

MAT 604: Algebraic Structures II

(C) Advanced study of groups, rings, and fields with emphasis on applications which can be used by high school mathematics teachers. Prerequisites: MAT 501 and 502. (3 cr. hr.)

MAT 610: Statistical Tools

(O) Basic concepts of descriptive, inferential statistics. Not open to mathematics majors; intended for graduate students in other areas. May be applied toward degree only with approval of student's major department. (3 cr. hr.)

MAT 671: High Algebra I

(O) Group theory. Permutation groups, cyclic groups, sets of generators, subgroups, cosets, normal subgroups quotient groups, commutator groups, direct products, centers, normalizers.

Prerequisite: MAT 604. (3 cr. hr.)

Related Education Courses

AED 540: Technologies in the Adolescence Mathematics Classroom

(M) Graphing calculators as teaching tools. The Internet as a source for mathematical software packages to promote active learning. A number of software packages dealing with a variety of mathematical topics including graphing functions, geometry and calculus will be investigated. (3 cr. hr.)

AED 601: Teaching Adolescence Mathematics

(C) Teaching and learning in the adolescence mathematics classroom. Concepts in adolescence mathematics, state and national standards, classroom management and motivation, teaching techniques and strategies for diverse learners. Prerequisite: EDU 600 (3 cr. hr.)

AED 626: Mathematics Methods for Middle School Teachers

(O) Content and methods for teaching mathematics topics at the middle school level such as number concepts, computation, estimation, functions, algebra, statistics, probability, geometry, and measurement. Prerequisite: Consent of department. (3 cr. hr.)

EDU 642: Seminar in Teaching Adolescence Mathematics

(C) Significant curriculum patterns, practices, and research in mathematics pedagogy in grades 7-12; opportunities for projects. Open only to students enrolled in the M.S.Ed program in adolescence mathematics. (3 cr. hr.)

AED 692: Field Experiences in Mathematics Teaching

(A) Seventy-five hours of directed observation of junior or senior high mathematics teachers and other school personnel. H, S, U grades are assigned. Prerequisites: MAT 501, 502, AED 540, 601, EDU 549, 661, 671, HLH 510, and PSY 501 or PSY 533. (2 cr. hr.)

AED 693: Student Teaching – Adolescence Mathematics I

(A) Five weeks of full time student teaching supervised by College faculty. H, S, U grades are assigned. Prerequisite: AED 692. (4 cr. hr.)

AED 694: Student Teaching – Adolescence Mathematics II

(A) Seven weeks of full time student teaching supervised by College faculty. H, S, U grades are assigned. Prerequisite: AED 693. (6 cr. hr.)

Physical Education

DEPARTMENT

SCHOOL

Professional Studies

FACULTY

See page 188 for a complete listing.

PROGRAM OFFERED

Master of Science in Education in Physical Education

Master of Science in Education Physical Education [PEC]

Students must take PED 610 and PED 611 before applying for candidacy. Apply for candidacy as soon as you are eligible. Apply for the degree at the beginning of your final course requirements. A maximum of six approved graduate hours may be transferred. Students may take up to nine hours of electives outside of physical education. All electives must be approved by the coordinator of graduate programs in physical education.

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, the applicant for enrollment in the program leading to a M.S.Ed. in Physical Education should present the following:

1. Official transcripts documenting a bachelor's degree from an accredited college or university in a physical education teacher certification program
2. A minimum of a 2.5 overall undergraduate grade-point average or a 2.8 grade-point average in the physical education major

PROGRAM REQUIREMENTS

- A. All students must take the physical education degree core of six credit hours:
 PED 610: Readings in Physical Education
 PED 611: Research Methods in Physical Education
- B. Students must choose to take either the concentration in curriculum and instruction or the concentration in adapted physical education.
- C. Curriculum and Instruction Concentration
Curriculum and Instruction Core (CURR)
 PED 621: Curriculum Construction in Physical Education
 PED 622: Research On Teaching Effectiveness in Physical Education
 PED 623: Assessment of Curricula and Instruction in Physical Education Curriculum and Instruction Speciality Electives (Minimum of six credit hours)
 PED 624: Elementary School PE Programs
 PED 625: Lifespan Motor Development
 PED 626: Fitness Programming and Curriculum for Schools
 PED 627: Models and Theories of Adventure Learning
 PED 691: Administration of Physical Education
- D. Adapted Physical Education Concentration
Adapted Physical Education Core (ADPE)
 PED 530: Introduction to Adapted Physical Education
 PED 635: Instructional Strategies in Adapted Physical Education

Park Center, Room E-254
 (607) 753-5577
www.cortland.edu/pe/

PED 636: Curriculum and Measurement in Adapted Physical Education

Adapted Specialty Electives (Minimum of three credit hours)

PED 531: Inclusive Outdoor Education

PED 637: Preschool Movement Programs

PED 638: Positive Behavior Management and Discipline

E. All other electives courses by advisement.

F. The culminating experience for the M.S.Ed.

PED 650: Thesis

PED 651: Comprehensive Examination Seminar*

**Thesis option (PED 650) waives the comprehensive exam requirement and limits electives to three hours.*

TOTAL CREDIT HOURS REQUIRED: 30

Physical Education

GRADUATE COURSES

PED 530: Introduction to Adapted Physical Education

(F) This course provides the students with knowledge required to meet the professional and legal mandates of Public Law 105-17 Individuals with Disabilities Act (IDEA) 1997 and amendments as they pertain to physical education for students with disabilities. The course is presented through a theoretical motor development perspective as it applies to the development of children with disabilities. Students will be required to complete a series of observations and labs with children with disability as it relates to typical motor development. Prerequisite: PED 336 or 356. (4 cr. hr.)

PED 531: Inclusive Outdoor Education

(B) This course is designed to address issues, models, and strategies pertaining to the development of inclusive outdoor education programs that address all ability levels including those with physical and developmental disabilities. Not open to students who have taken REC 531 (also listed as REC 531). (3 cr. hr.)

PED 552: Philosophy, Principles and Organization of Athletics in Education

(S) Basic philosophy and principles of athletics and various regulations pertaining to athletics. Required of all nonphysical education certified teachers who coach athletic teams at any level in New York State schools. Does not meet master's degree requirements. (3 cr. hr.)

PED 553: Health Science: First Aid, Training, Conditioning

(F) Injury prevention through proper conditioning, anatomical basis of injury recognition, proper treatment of athletic injuries emphasized. Legal implications, protective equipment, common tools used in care of injured athletes will be studied. Required for all nonphysical education certified teachers who coach athletic teams at any level in New York State schools. Not open to students completing PED 221 or 421. Does not meet master's degree requirements. (2 cr. hr.)

PED 554: Biological, Sociological and Psychological Aspects of Coaching

(F) Introductory overview of the biological, psychological and sociological principles as they relate to the coaching of children

K-12 in our society. Required of all nonphysical education certified teachers who coach athletic teams at any level in New York State schools. Does not meet master's degree requirements. (2 cr. hr.)

PED 600: Individual Physical Education Problems

(A) Individual study project permitting teachers with unique problems to consult with specialists in their field. Hours, credit to be arranged. (1-2 cr. hr.)

PED 602: Research Project

(A, M) Guidance, direction in conducting individual research project. Prerequisite: PED 601, consent of advisor. (Also listed as EXS 602.) (3 cr. hr.)

PED 610: Readings in Physical Education

(A) This course consists of a comprehensive, but foundational, investigation of recent literature and research in the various areas of study which directly influence the field of physical education. (3 cr. hr.)

PED 611: Research in Physical Education and Recreation

(A, M) Nature, scope, methodology; emphasizing fields of physical education and recreation. (Also listed as REC 601.) (3 cr. hr.)

PED 621: Curriculum Construction In Physical Education

(O) Program planning applicable to student's local situation. Generally accepted educational aims, objectives, philosophies, principles of curriculum construction. (3 cr. hr.)

PED 622: Research on Teaching Effectiveness in Physical Education

(O) Course designed for teachers who want to be informed about teacher effectiveness research findings and improve own teaching practices. Participation in microteaching and reflective teaching featured. Prerequisite: Graduate standing with teaching experience. (3 cr. hr.)

PED 623: Assessment of Curricula and Instruction in Physical Education

(B) Course will cover issues relating to assessment for the physical education teacher. Current issues such as the integration of New York State Learning Standards into unit planning will be a major focus. Authentic assessment techniques, assessment in the affective domain, development of cognitive tests, and the development of grading systems will be addressed. (3 cr. hr.)

PED 624: Elementary School Physical Education Programs

(O) Trends in philosophy, content, methods, evaluation. Curriculum organization, integration of physical education and elementary education. Research evaluated; implications determined for use in planning conducting programs. Prerequisite: 570. (3 cr. hr.)

PED 625: Lifespan Motor Development

(F) The course is designed to provide students with an opportunity to acquire knowledge, insights, and skills germane to the study of human growth and motor development over the life span. The course content focuses on movement changes throughout the life-span and their implications for the curriculum in physical education. (3 cr. hr.)

PED 626: Fitness Programming and Curriculum for Schools

(C) This course is designed for students who desire to expand their knowledge base on how to create and implement developmentally appropriate fitness oriented curricula for school-aged children. Topics include: aspects of developmental physiology, children's responses to exercise, maturational changes, changes in health related fitness throughout childhood, introduction to the Physical Best Program and other fitness programs for children, nutrition, activity planning, fitness assessment, and behavior modification. (3 cr. hr.)

PED 627: Models and Theories of Adventure Learning

(S) This course is devoted to the study of adventure education as it relates to Physical Education learning standards using current models and theories. Topics include discussions on current models of participation and levels of engagement, learning and teaching styles and relevant historical developments. Students also study the relationships of adventure education goals and objectives to current National and State educational objectives. Not available for students who have completed REC 574. (3 cr. hr.)

PED 634: Knowledge Test Construction

In-depth coverage of knowledge test construction including test planning and organization, subjective test items, objective test items, test analysis, and computer-assisted programs. Lecture and workshop format. Not open to students with credit for EDU 650. (3 cr. hr.)

PED 635: Instructional Strategies in Adapted Physical Education

(S) This course provides students with an understanding of instructional strategies using theoretical learning models from kinesiology for individuals with disabilities. The lab experience will be focused on developing an individualized educational program incorporating curricular modifications and present level of performance. (4 cr. hr.)

PED 636: Curriculum and Measurement in Adapted Physical Education

(S) This course provide students with an understanding of the comprehensive service delivery model and factors that contribute to curricular development as well as knowledge related to assessment and evaluation. The lab experience will be focused on developing a "top down plan" an individual with a disability. (4 cr. hr.)

PED 637: Preschool Movement Programs

(S) This course is designed to provide students opportunities to learn and apply basic principles of Developmentally Appropriate Practice (DAP) framework and child centered preschool curricula in teaching movement to young children. (3 cr. hr.)

PED 638: Positive Behavior Management and Discipline in Physical Education

(M) This course is designed to address issues, models, and strategies when dealing with behavior management and discipline in physical education. The Behaviorist Model, the Psychoanalytical Model, and the Teaching Personal and Social Responsibility Model (TPSR) will provide the basic learning framework for the course. (3 cr. hr.)

PED 641: Graduate Readings in Physical Education

(A, M) In-depth reading, study, discussion in one or more areas. Prerequisite: Acceptance as candidate for degree. (Also listed as EXS 641.) (3 cr. hr.)

PED 650: Master's Thesis

(A, M) Physical education research. (Also listed as EXS 650.) (6 cr. hr.)

PED 651: Comprehensive Examination Seminar

(A) In this course students will synthesize knowledge and understanding gained in the core program and make connections across all areas of the master's program in preparation for the comprehensive examination. Prerequisites: PED 610, 611, (and 621, 622, 623 for students following the curriculum and instruction concentration) (and 530, 635, and 636 for students following the adapted physical education concentration). (3 cr. hr.)

PED 691: Administration of Physical Education

(O) Basic concepts, theories of organization, administration; application to physical education, athletics. Persistent administrative problems in the field. (3 cr. hr.)

Recreation and Leisure Studies

Park Center, Room E-334
(607) 753-4941
E-mail: rls@cortland.edu
www.cortland.edu/rec/

DEPARTMENT

SCHOOL

Professional Studies

FACULTY

See page 212 for a complete listing.

PROGRAMS OFFERED

Master of Science in Recreation
Master of Science in Education in Recreation Education

MAJORS OFFERED

Recreation
Recreation Education

CONCENTRATIONS OFFERED

Outdoor and Environmental Education
Management of Leisure Services
Therapeutic Recreation

DEPARTMENTAL INFORMATION

The Recreation and Leisure Studies Department at SUNY Cortland is the most comprehensive professional preparation program of its kind in New York State. Established in 1948, SUNY Cortland's department is also one of the oldest and most highly respected programs in the United States. Many of the most distinguished scholars and professionals in the recreation field began their careers by studying here. The curriculum further prepares students for a wide variety of career opportunities in outdoor recreation, therapeutic recreation, and recreation management in a wide variety of settings and agencies.

SPECIAL FEATURES

- Very bright job market for recreation graduates, as predicted by the U.S. Department of Labor, and as evidenced by the high employment rate (over 95 percent) of our graduates
- Nationally and internationally recognized faculty committed to students
- Opportunities for research, in a wide array of areas including outdoor recreation, therapeutic recreation and management
- Internship experience
- The Annual Cortland Recreation Conference – one of the premier recreation conferences in the northeast
- Outdoor Education Center in the Adirondacks
- Opportunities for international study
- Graduate assistantships, available on a competitive basis

Master of Science Recreation [REC]

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, the applicant for enrollment in the program leading to a Master of Science in Recreation should present the following:

1. Official transcripts documenting a bachelor's degree from an accredited college or university

2. Applicants are generally required to have an undergraduate cumulative grade point average of 2.8 (on a 4.0 scale). However, circumstances including, but not limited to, endeavors following completion of a bachelor's degree and performance in the last two years of a bachelor's degree program will be considered in reviewing applications from students with lower grade point averages. Students who feel they are qualified in spite of an undergraduate grade point average below a 2.8 are encouraged to apply for admission.
3. A resume
4. A one- to two-page statement of the applicant's educational and professional goals
5. Names, addresses and phone numbers of three references
6. If the applicant lacks substantial academic background in recreation, three to 12 credit hours of corequisite course work may be required in addition to the degree requirements

PROGRAM REQUIREMENTS

A minimum of 33-34 credit hours of approved graduate work as described below is required for the M.S. in recreation.

A. Recreation: 21 credit hours

REC 601: Recreation Research and Evaluation I
REC 602: Recreation Research and Evaluation II
REC 603: Historical, Philosophical, and Theoretical Perspectives of Recreation and Leisure

A supervision or administration course (3 cr. hr.)

Nine credit hours in one of the following concentrations:
Outdoor and Environmental Education (EOE)
Management of Leisure Services (MGLS)
Therapeutic Recreation (TR)

B. Supporting Area: 6 credit hours

Additional courses in recreation or in areas closely related to recreation such as health, political science, sociology, physical education, etc.

C. Electives: 6 credit hours

Behavioral, natural, or social sciences

D. Culminating Activity: 1-6 credits

M.S. degree candidates must successfully complete a culminating activity from the three following options:

1. REC 683: Comprehensive Examination in Recreation and Leisure Studies
2. REC 684: Thesis
3. REC 685: Master's Project

Normally students earn up to six hours of credit for completion of a thesis or project in lieu of a thesis, which is substituted for course work from the above requirements, upon advisement.

For each concentration (therapeutic recreation, management, and outdoor/environmental education), the department requires or recommends specific courses and supporting courses. These curriculum guidelines are available from the department.

Other requirements for the award of the M.S. may be determined by the department and must be ascertained by the student in consultation with a department graduate advisor.

TOTAL CREDIT HOURS REQUIRED: 33-34

Master of Science in Education Recreation Education [RED]

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, applicants for admission to the M.S.Ed. in Recreation Education must meet the requirements outlined below:

1. Official transcripts documenting a bachelor's degree from an accredited college or university
2. Documentation of an initial/provisional certificate (or a certificate of qualification for initial or provisional certification) in any subject area issued by the New York State Education Department
3. Applicants are generally required to have an undergraduate cumulative grade point average of 2.8 (on a 4.0 scale). However, circumstances including, but not limited to, endeavors following completion of a bachelor's degree and performance in the last two years of a bachelor's degree program will be considered in reviewing applications from students with lower grade point averages. Students who feel they are qualified in spite of an undergraduate grade point average below a 2.8 are encouraged to apply for admission.
4. A resume
5. A one- or two-page statement of the applicant's educational and professional goals
6. Names, addresses, and phone numbers of three references
7. If the applicant lacks substantial academic background in recreation, three to 12 credit hours of corequisite course work may be required in addition to the degree requirements described herein.

PROGRAM REQUIREMENTS

A minimum of 33-34 credit hours of approved graduate work as described below is required for the M.S. Ed.

A. Professional Education: 15 hours

- REC 601: Recreation Research and Evaluation I
- REC 602: Recreation Research and Evaluation II
- REC 603: Historical, Philosophical, and Theoretical Perspectives of Recreation and Leisure
- An education elective, by advisement
- A course in curriculum development

B. Recreation Education Concentration: 12 credit hours

The recreation education concentration may be taken in one of the following areas:

- Outdoor and Environmental Education (EOE)
- Management of Leisure Services (MGLS)
- Therapeutic Recreation (TR)

Six hours must be in recreation education and six hours may be in areas closely related to recreation such as education, physical education, health, psychology, or sociology. No more than four credits in activity clinics or workshops may be counted toward the master's degree.

C. Electives: 6 credit hours (selected under advisement)

D. Culminating Activity: 1-6 credit hours

M.S.Ed. degree candidates must successfully complete a culminating activity from the three following options:

1. REC 683: Comprehensive Examination in Recreation and Leisure Studies
2. REC 684: Thesis
3. REC 685: Master's Project

Normally students earn up to six hours of credit for completion of a thesis or project in lieu of a thesis, which is substituted for course work from the above requirements, upon advisement.

For each concentration (therapeutic recreation, management, and outdoor/environmental education), the department requires or recommends specific courses and supporting courses. These curriculum guidelines are available from the department.

Other requirements for the award of the M.S.Ed. may be determined by the Recreation and Leisure Studies Department and must be ascertained by the student in consultation with a department graduate advisor.

TOTAL CREDIT HOURS REQUIRED: 33-34

Recreation and Leisure Studies

GRADUATE COURSES

REC 503: Campus Recreation Programming and Administration
(O) Design, coordination, delivery, and management of leisure, arts, and recreation programs and services for the campus community. Topics include programming principles, types of programs, interoffice/provider coordination, publicity, budgeting, supervision, evaluation, facilities, equipment management, and auxiliary services. (3 cr. hr.)

REC 508: Leisure Services for Older Adults
(C) Intensive study of problems associated with aging; implications for health, recreation. Recreational needs, programs; physical and emotional health; sociological, psychological, educational, economic factors pertinent to aging. (3 cr. hr.)

REC 509: Human Resource Management in Leisure Services
(S) Contemporary issues and related administrative practices associated with managing human resources in leisure services. Examining concepts, principles, and objectives of personnel supervision, including functions, processes, identification, and application of methods and techniques. (3 cr. hr.)

REC 529, 629: Special Topics in Recreation and Leisure Studies
Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

REC 530: Therapeutic Recreation Techniques and Procedures
(S) Techniques and procedures relevant to the therapeutic recreation process including activity analysis, assessment, and documentation. Lab is required. Prerequisite: REC 330 or graduate status. (3 cr. hr.)

REC 531: Inclusive Outdoor Education
(O) This course is designed to address the issues, models, and strategies pertaining to the development of inclusive outdoor education programs that address all ability levels including those with physical and developmental disabilities. (Also listed as PED 531). Not open to students with credit for PED 531. (3 cr. hr.)

REC 535: Therapeutic Recreation Program Design
(F) Design of comprehensive and specific programs in therapeutic recreation settings; therapeutic approaches and facilitation techniques; examination of related professional trends and issues. Prerequisite: REC 430 or 530. (3 cr. hr.)

REC 538: Administration of Therapeutic Recreation

(C) In-depth examination of issues related to administration of therapeutic recreation in clinical and community settings.

Prerequisite: REC 330 or graduate status. (3 cr. hr.)

REC 541: Site and Facilities Planning

(O) Design of recreation areas and facilities; feasibility studies, site selection, environmental impact, accessibility, planning, and development. (3 cr. hr.)

REC 544: Commercial Recreation Management

(B) The study of commercial recreation as a major component of understanding leisure service delivery systems. Analysis of the development potential of different types of recreation enterprises including resources, location, risks, sources of financing, pricing, managerial requirements, marketing, and sources of technical assistance. (3 cr. hr.)

REC 545: Adirondack Park Policies and Issues

(O) Analysis of environmental and land-use policies in the largest park in the contiguous United States. Often taught at Cortland's Outdoor Education Center at Raquette Lake in the Adirondack Park. When taught at the Outdoor Education Center, students are assessed fee for room and board. Not open to students with credit for REC 345. (3 cr. hr.) ■

REC 546: Legal Aspects of Recreation and Park Services

(F) Study of the body of law governing recreation and park management. (3 cr. hr.)

REC 560: Camp and Outdoor Program Administration

(F) Detailed analysis of administrative problems in the establishment, operation of resident and day camps and other outdoor, challenge, or environmental education programs and centers. Research literature, current problems for camp, program, and center directors. Prerequisite: REC 360 or 370 or graduate status, or consent of the department. (3 cr. hr.)

REC 569: Environmental and Cultural Interpretation

(C) Investigation of concepts and principles of environmental and cultural interpretation. Methods, techniques, resources used to design and prepare interpretive media, such as displays, materials, multimedia productions, trails, and facilities in an increasingly multicultural society. Field trips and outdoor laboratory experiences. (3 cr. hr.)

REC 574: Outdoor Pursuits Education and Leadership

(F) The understanding and application of the process of teaching, learning, and leading outdoor pursuits. Program theory, instructional design, leadership techniques, and safety management principles associated with the conduct of outdoor pursuits and adventure education programs. Prerequisite: REC 370, 379 or PED 308 or graduate status. (3 cr. hr.)

REC 600: Survey of the Recreation and Leisure Profession

(A) This course is designed for graduate students who are new to the field of recreation, leisure, and park services. The course introduces the student to the plethora of professional sectors within the delivery of recreation, leisure, and park services. The nature, scope, and objectives of each of the professional areas will be examined in order to provide the student with a comprehensive knowledge base of the recreation and leisure services profession. (2 cr. hr.)

REC 601: Recreation Research and Evaluation I

(F) This is the first course in the recreation research and evaluation sequence in the master's program. In-depth coverage of systematic inquiry, including the nature, scope, methodology, analysis, and presentation of results in research and evaluation in recreation and leisure studies, with particular focus on the recreation research literature. Students will learn and apply the research process, both through experiential learning and preparation of a research proposal. (3 cr. hr.) ■

REC 602: Recreation Research and Evaluation II

(S) This is the second course in the recreation research and evaluation sequence in the master's program. In-depth coverage of systematic inquiry, including the nature, scope, methodology, analysis, and presentation of results in research and evaluation in recreation and leisure studies, with particular focus on the recreation research literature. Students will learn and apply the research process, both through experiential learning and preparation of a research proposal. Prerequisite: REC 601. (3 cr. hr.) ■

REC 603: Historical, Philosophical and Theoretical Perspectives of Recreation and Leisure

(B) An in-depth analysis of the historical, philosophical, and theoretical perspectives of leisure, recreation, and play from ancient cultures to modern-day concepts. This foundation course focuses on historical and theoretical perspectives of leisure, the role of leisure and recreation throughout history in various cultures, and the evolution of leisure to its modern-day construct. (3 cr. hr.) ■

REC 605: Fieldwork in Recreation

(A) Supervised professional experience in the recreation and leisure studies field. Prerequisite: REC 600, consent of instructor. S, U grades are assigned. (1-3 cr. hr.)

REC 606: Recreation Internship

(A) Supervised internship in agency cooperating with the Recreation and Leisure Studies Department. Capstone experience that integrates theory with practice, for a minimum of eight weeks and 320 hours. Prerequisites: Approval of advisor; majority of course work completed. Consult department graduate advisement manual for specific prerequisites and policies. (3 cr. hr.)

REC 610: Wilderness and American Culture

(F) History of ideas and attitudes about wilderness as expressed in the art, literature, philosophy, and politics of American culture. Emphasis on developing views of wilderness, nature, and environment that are historically and philosophically grounded. (3 cr. hr.) ■

REC 630: Advanced Methods in Therapeutic Recreation

(O) In-depth investigation of techniques and procedures basic to the therapeutic recreation process, including activity analysis, assessment, and documentation. Lab is required. (3 cr. hr.)

REC 635: Advanced Program Design in Therapeutic Recreation

(O) In-depth investigation into design of comprehensive and specific programs; therapeutic approaches and facilitation techniques; related issues and trends. Prerequisite: REC 630. (3 cr. hr.)

REC 640: Outdoor Recreation Resource Management

(S) Planning, design, management, and maintenance of recreation resources ranging from small multipurpose urban parks to large forest recreation and wilderness areas. (3 cr. hr.)

REC 682: Administration of Community Recreation

(O) Problems in organization, administration of community recreation; recognized best practices in meeting them. Administrative problems experienced by individual class members. Conferences, reports, outside presentation, field trips. (3 cr. hr.)

REC 683: Comprehensive Examination in Recreation and Leisure Studies
 (A) This course is designed to assist those graduate students who are preparing to take the graduate comprehensive examination. The first half of the semester will focus on preparing students for the exam. The exam itself will be administered approximately mid-semester, and the time remaining in the course will allow for remedial work, if needed. Only students who have completed at least 18 credit hours are eligible to enroll in this course. Prerequisites: REC 601 and 602. (1 cr. hr.)

REC 684: Thesis
 (A) Prerequisite: Candidate for master of science degree in recreation, consent of Thesis Committee. A maximum of six semester hours of credit may count toward a degree. S/U grading. Prerequisites: REC 600 and 602. (1-6 cr. hr.)

REC 685: Master's Project
 (A) This course is designed for graduate students who would prefer to investigate an area of their concentration in lieu of the graduate comprehensive examination. Prerequisite: Candidate for M.S. or

M.S.Ed. degree in recreation, REC 601, REC 602 and consent of academic advisor. A maximum of six hours of credit may count toward a degree. S/U grading. (1-6 cr. hr.)

REC 699: Independent Study or Research in Recreation
 (A) Supervised independent study of topic approved by study supervisor, advisor, and department chair. May be repeated. (1-3 cr. hr.)

Related Education Courses

EDU 515: Leisure Education
 (B) Introduction to philosophy, principles, and techniques of leisure education. Implications for curriculum development in various settings and leisure service delivery systems. (3 cr. hr.) ■

EDU 568: Environmental and Outdoor Education
 (S) Development of program material for various age, grade levels in public schools. Policies, procedures, practices in supervision, administration of outdoor education. (3 cr. hr.)

Adolescence Education: Science (7-12)

Bowers Hall, Room 112
 (607) 753-2907
 E-mail: janker@cortland.edu

SCHOOL

Arts and Sciences

FACULTY

Rena Crockett Janke (Coordinator)

PROGRAMS OFFERED

Master of Arts in Teaching in Adolescence Education: Science (7-12)

Biology
 Chemistry
 Earth Science
 Physics

Master of Science in Education in Adolescence Education: Science (7-12)

Biology
 Chemistry
 Earth Science
 Physics
 Physics/Mathematics

Master of Arts in Teaching

Adolescence Education: Science (7-12)

[ABI] [ACH] [AES] [APH]

The M.A.T. is designed for applicants who have a bachelor's degree in biology, chemistry, geology (earth science), or physics (or a closely related field) and who are seeking *initial* certification to teach one of the sciences in grades 7-12.

CAREER POTENTIAL

- Teacher: biology, chemistry, earth science or physics in grades 7-12
- Teacher: seventh or eighth grade general science (requires study in at least three sciences)

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program as stated in this catalog, the applicant for enrollment in the program leading to the Master of Arts in Teaching in Adolescence Education: Science (7-12) should present the following:

1. All undergraduate transcripts that reflect the requirements listed under relevant science:

Science - Biology

- evidence of completion of a bachelor's degree in biology or functionally related area
- at least 30 credit hours of course work in biology
- at least 12 credit hours of course work in chemistry
- at least eight hours of introductory physics

Science - Chemistry

- evidence of completion of a bachelor's degree in chemistry or functionally related area
- at least 30 credit hours of course work in chemistry
- at least eight credit hours of course work in biology or geology
- at least eight credit hours in physics

Science - Earth Science

- evidence of completion of a bachelor's degree in geology or functionally related area
- at least 30 credit hours of course work in geology/earth science
- at least eight credit hours of course work in biology and eight credit hours in chemistry
- at least eight credit hours in physics, plus three credit hours of astronomy

Science - Physics

- evidence of completion of a bachelor's degree in physics or functionally related area
- at least 30 credit hours of course work in physics

- at least eight credit hours in chemistry
 - at least eight credit hours of course work in biology or geology
2. An overall undergraduate grade point average of at least 2.5
 3. Three letters of Recommendation from former professors or professional colleagues who can speak to the candidate's preparation and competence for teaching science in grades 7-12
 4. An interview with the coordinator of adolescence education - science (7-12)
 5. Application to the SUNY Cortland Teacher Education Program

PROGRAM REQUIREMENTS

- A. Content: *9 credit hours in area of specialization: biology, chemistry, geology, or physics
- B. Pedagogy: *33 credit hours — 19 hours of course work plus 14 hours of student teaching
 - EDU 549: Literacy in the Middle and Secondary School
 - AED 662: Language Development in Adolescents for Non-Literature Majors
 - EDU 600: The Secondary School
 - AED 642: Methods I: Teaching Science in the Middle and Secondary School
 - AED 643: Methods II: Teaching Science in the Middle and Secondary Schools
 - AED 644: Field Practicum
 - AED 645: Student Teaching
 - PSY 532: Advanced Adolescent Psychology

*Nineteen credit hours in pedagogy and nine credit hours in content must be taken prior to student teaching. A minimum overall grade point average of 3.0 is required to be eligible to student teach.

- C. Culminating Master's Project: 3 credit hours
 - SCI 690: Independent Study in Science/Mathematics Education

TOTAL CREDIT HOURS REQUIRED: 45

Note: Specific information regarding additional requirements (state examinations, identification and reporting child abuse and maltreatment, alcohol and drug abuse education, safety and violence prevention education, fingerprinting, and foreign language requirements) for New York State teaching certification can be found on page 248 of this catalog.

Master of Science in Education Adolescence Education: Biology (7-12) [ABI]

CAREER POTENTIAL

- Teacher: biology (grades 7-12)
- Science department chair

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, the applicant for enrollment in the program leading to a M.S.Ed. in Adolescence Education: Biology (7-12) should present the following:

1. All undergraduate transcripts which reflect evidence of completion of a bachelor's degree in biology or functionally related subject area. The transcripts need to show at least 30 credit hours of course work in the area of the certification.

2. Documentation of an initial/provisional certificate (or a certificate of qualification for initial or provisional certification) to teach biology (7-12) issued by the New York State Education Department
3. An overall undergraduate grade point average of at least 2.5
4. Three letters of recommendation from former professors or professional colleagues who can speak to the candidate's preparation and competence for teaching biology in grades 7-12.
5. An interview with the coordinator of adolescence education — science (7-12)

PROGRAM REQUIREMENTS

- A. Content: 21 credit hours in the sciences
 - 12 credit hours in graduate biology
 - 9 credit hours in chemistry, geology, or physics
- B. Pedagogy: 6 credit hours
 - Option I: Without middle childhood extension
 - AED 646: Seminar in Teaching Science in the Middle and Secondary Schools
 - Education elective from the areas of social, historical, philosophical, or psychological foundations of education
 - Option II: Leads to a middle childhood extension certificate for grades 5-6
 - EDU 533: Introduction to Middle Childhood Education
 - PSY 533: Advanced Developmental Psychology
- C. Culminating Master's Project: 3 credit hours
 - SCI 690: Independent Study in Science/Mathematics Education

ADDITIONAL REQUIREMENTS

Other requirements for the award of the degree may be determined by the departments concerned and must be ascertained by the student in consultation with the adolescence education science coordinator.

TOTAL CREDIT HOURS REQUIRED: 30

Note: Specific information regarding additional requirements for qualification for the professional certificate in New York State may be found on page 248 of this catalog.

Master of Science in Education Adolescence Education: Chemistry (7-12) [ACH]

CAREER POTENTIAL

- Teacher: chemistry (grades 7-12)
- Science department chair

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, the applicant for enrollment in the program leading to a M.S.Ed. in Adolescence Education: Chemistry (7-12) should present the following:

1. All undergraduate transcripts which reflect evidence of completion of a bachelor's degree in chemistry or functionally related subject area. The transcripts need to show at least 30 credit hours of course work in the area of the certification
2. Documentation of an initial/provisional certificate (or a certificate of qualification for initial or provisional certification) to teach chemistry (7-12) issued by the New York State Education Department
3. An overall undergraduate grade point average of at least 2.5

4. Three letters of recommendation from former professors or professional colleagues who can speak to the candidate's preparation and competence for teaching chemistry in grades 7-12.
5. An interview with the coordinator of adolescence education: science (7-12)

PROGRAM REQUIREMENTS

- A. Content: 21 credit hours in the sciences
12 credit hours in graduate chemistry
9 credit hours in biology, geology, or physics
- B. Pedagogy: 6 credit hours
- Option I: Without middle childhood extension
AED 646: Seminar in Teaching Science in the Middle and Secondary Schools
Education elective from the areas of social, historical, philosophical, or psychological foundations of education
- Option II: Leads to a middle childhood extension certificate for grades 5-6
EDU 533: Introduction to Middle Childhood Education
PSY 533: Advanced Developmental Psychology
- C. Culminating Master's Project: 3 credit hours
SCI 690: Independent Study in Science/Mathematics Education

ADDITIONAL REQUIREMENTS

Other requirements for the award of the degree may be determined by the departments concerned and must be ascertained by the student in consultation with the adolescence education science coordinator.

TOTAL CREDIT HOURS REQUIRED: 30

Note: Specific information regarding additional requirements for qualification for the professional certificate in New York State may be found on page 248 of this catalog.

Master of Science in Education Adolescence Education: Earth Science (7-12) [AES]

CAREER POTENTIAL

- Teacher: earth science (grades 7-12)
- Science department chair

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, the applicant for enrollment in the program leading to a M.S.Ed. in Adolescence Education: Earth Science (7-12) should present the following:

1. All undergraduate transcripts which reflect evidence of completion of a bachelor's degree in geology/earth science or functionally related subject area. The transcripts need to show at least 30 credit hours of course work in the area of the certification.
2. Documentation of an initial/provisional certificate (or a certificate of qualification for initial or provisional certification) to teach earth science (7-12) issued by the New York State Education Department
3. An overall undergraduate grade point average of at least 2.5
4. Three letters of recommendation from former professors or professional colleagues who can speak to the candidate's preparation and competence for teaching earth science in grades 7-12.
5. An interview with the coordinator of adolescence education: science (7-12)

PROGRAM REQUIREMENTS

- A. Content: 21 credit hours in the sciences
12 credit hours in graduate geology
9 credit hours in biology, chemistry, or physics
- B. Pedagogy (6 credit hours)
- Option I: Without middle childhood extension
AED 646: Seminar in Teaching Science in the Middle and Secondary Schools
Education elective from the areas of social, historical, philosophical, or psychological foundations of education
- Option II: Leads to a middle childhood extension certificate for grades 5-6
EDU 533: Introduction to Middle Childhood Education
PSY 533: Advanced Developmental Psychology
- C. Culminating Master's Project: 3 credit hours
SCI 690: Independent Study in Science/Mathematics Education

ADDITIONAL REQUIREMENTS

Other requirements for the award of the degree may be determined by the departments concerned and must be ascertained by the student in consultation with the adolescence education science coordinator.

TOTAL CREDIT HOURS REQUIRED: 30

Note: Specific information regarding additional requirements for qualification for the professional certificate in New York State may be found on page 248 of this catalog.

Master of Science in Education Adolescence Education: Physics (7-12) [APH]

CAREER POTENTIAL

- Teacher: physics (grades 7-12)
- Science department chair

ADMISSION REQUIREMENTS

program stated in this catalog, the applicant for enrollment in the program leading to a M.S.Ed. in Adolescence Education: Physics (7-12) should present the following:

1. All undergraduate transcripts which reflect evidence of completion of a bachelor's degree in physics or functionally related subject area. The transcripts need to show at least 30 credit hours of course work in the area of the certification.
2. Documentation of an initial/provisional certificate (or a certificate of qualification for initial or provisional certification) to teach physics (7-12) issued by the New York State Education Department
3. An overall undergraduate grade point average of at least 2.5
4. Three letters of recommendation from former professors or professional colleagues who can speak to the candidate's preparation and competence for teaching physics in grades 7-12.
5. An interview with the coordinator of adolescence education — science (7-12)

PROGRAM REQUIREMENTS

- A. Content: 21 credit hours in the sciences
12 credit hours in graduate physics
9 credit hours in biology, chemistry, geology
- B. Pedagogy: 6 credit hours
- Option I: Without middle childhood extension
AED 646: Seminar in Teaching Science in the Middle and Secondary Schools
Education elective from the areas of social, historical, philosophical, or psychological foundations of education
- Option II: Leads to a middle childhood extension certificate for grades 5-6
EDU 533: Introduction to Middle Childhood Education
PSY 533: Advanced Developmental Psychology
- C. Culminating Master's Project: 3 credit hours
SCI 690: Independent Study in Science/Mathematics Education

ADDITIONAL REQUIREMENTS

Other requirements for the award of the degree may be determined by the departments concerned and must be ascertained by the student in consultation with the adolescence education science coordinator.

Note: Specific information regarding additional requirements for qualification for the professional certificate in New York State may be found on page 248 of this catalog.

TOTAL CREDIT HOURS REQUIRED: 30

Master of Science in Education Adolescence Education: Physics and Mathematics (7-12) [APM]

CAREER POTENTIAL

- Teacher: physics and mathematics (grades 7-12)
- Science department chair

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, the applicant for enrollment in the program leading to a M.S. Ed. in Adolescence Education: Physics and Mathematics (7-12) should present the following:

1. All undergraduate transcripts which reflect evidence of completion of a bachelor's degree in physics/mathematics or functionally related subject area. The transcripts need to show at least 30 credit hours of course work in physics and at least 30 hours of course work in mathematics.
2. Documentation of an initial/provisional certificate (or a certificate of qualification for initial or provisional certification) to teach physics and mathematics issued by the New York State Education Department
3. An overall undergraduate grade point average of at least 2.5
4. Three letters of recommendation from former professors or professional colleagues who can speak to the candidate's preparation and competence for teaching physics/mathematics in grades 7-12.
5. An interview with the coordinator of adolescence education: science (7-12)

PROGRAM REQUIREMENTS

- A. Content: 24 credit hours in physics and mathematics
12 credit hours in graduate physics
12 credit hours in graduate mathematics
- B. Pedagogy: 3-6 credit hours
- Option I: Without middle childhood extension
AED 540: Technologies in the Adolescence Mathematics Classroom
- Option II: Leads to a middle childhood extension certificate for grades 5-6
EDU 533: Introduction to Middle Childhood Education
PSY 533: Advanced Developmental Psychology
- C. Culminating Master's Project: 3 credit hours
SCI 690: Independent Study in Science/Mathematics Education

ADDITIONAL REQUIREMENTS

Other requirements for the award of the degree may be determined by the departments concerned and must be ascertained by the student in consultation with the adolescence education science coordinator.

Note: Specific information regarding additional requirements for qualification for the professional certificate in New York State may be found on page 248 of this catalog.

TOTAL CREDIT HOURS REQUIRED: 30-33

Sciences

GRADUATE COURSES

Biology

BIO 501: Advanced Invertebrate Biology
(F-O) Structure and function, evolution, and life histories of major invertebrate phyla. Three lectures, one three-hour laboratory. Prerequisite: Four semesters of college-level biology or permission of instructor. Not open to students with credit for BIO 401. (4 cr. hr.)

BIO 502: Comparative Functional Morphology
(O) An examination of the principles and breadth of vertebrate functional morphology. Emphasis on the linkage of structure and function from the comparative and phylogenetic perspectives. Students may not receive credit for both BIO 402 and BIO 502. Prerequisite: Four semesters of biology or permission of the instructor. (3 cr. hr.)

BIO 505: Case Studies in Conservation Biology
(M-C) Selected case studies in conservation biology, including conservation of species and genetic diversity, endangered species reintroductions, and the application of geographic information systems and computer models to the discipline. Not open to students with credit for BIO 405. Oral presentation, discussions and investigative laboratories/field trips. Prerequisites: One year of introductory biology. (3 cr. hr.)

BIO 508: Entomology

(C) An overview of insect biology including behavior, ecology, systematics, physiology, morphology, and the economic/medical impact of insects on human societies. Not open to students with credit for BIO 408. Prerequisites: A minimum of four semesters of biology courses or permission of the instructor. (3 cr. hr.)

BIO 512: Limnology

(F) Aquatic biology covering thermal, physical, chemical attributes of fresh water and their effect on composition of an aquatic ecosystem. Two lectures, one three-hour laboratory. Prerequisites: BIO 110-111 or BIO 201-202, CHE 222. (3 cr. hr.)

BIO 514: Mammalian Physiology

(F) Functions of mammalian organ systems, including the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Three lectures, one three-hour laboratory. Prerequisite: A course in cell biology or equivalent or permission of instructor. (4 cr. hr.) ■

BIO 516: Controversies in Evolutionary Biology

(O) Advanced investigations of current areas of debate within modern evolutionary biology. Hypotheses addressed range from levels of selection to evolutionary medicine, with additional topics suggested by students. Includes critical evaluations of readings from the current literature (primary, secondary and popular). Primarily in a seminar format. Prerequisite: At least four semesters of biology courses or permission of the instructor. (3 cr. hr.)

BIO 521: Molecular Genetics

(F-C) Modern genetic and molecular biological techniques applied to a study of genes, their structure, function, mutagenesis, and regulation. Three lectures, one three-hour laboratory. Prerequisites: BIO 312; CHE 301. (4 cr. hr.)

BIO 523: Field Mycology

(M-C) Emphasis on field and laboratory techniques used in identifying macrofungi (mushrooms, polypores, stinkhorns, coral fungi, jelly fungi, cup fungi, etc.). Skills involving microscopic preparations and interpretation of cells and tissues, microchemical reactions, and tissue sectioning will be developed. Lecture and laboratory topics will cover morphology, taxonomy, ecology, and economic importance of macrofungi. Project and paper required. Prerequisite: Year of college-level biology. (3 cr. hr.)

BIO 524: Physiological Ecology

(S-C) Physiological responses and adaptation of organisms to environmental factors. Prerequisite: Four semesters of undergraduate biology or permission of instructor. (3 cr. hr.) ■

BIO 525: Developmental Biology

(S) Examination of embryology, molecular aspects of development, differentiation, regeneration and pattern formation. Three lectures, one three-hour laboratory. Prerequisite or corequisite: A course in cell biology or equivalent. (4 cr. hr.) ■

BIO 529, 629: Special Topics in Biological Sciences

Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

BIO 533: Biology Seminar

(O) Selected topics dealing with current issues in biology. May be taken more than once as subtitle changes. Prerequisite: Consent of instructor. (1-3 cr. hr.)

BIO 600: Biology of Human Aging

(F) Biological aspects of human aging; cellular aging and cancer, structural and functional changes in all major body systems, age-related dysfunctions and the causes of biological aging. (3 cr. hr.)

BIO 607: Integrated Field Biology

(C) Examination of biological diversity and natural history through an integrated experimental approach. Occasional Saturday or weekend field trips may be required. One two-hour and one three-hour lecture/laboratory per week. Not open to students with credit for either BIO 307 or BIO 310. Prerequisite: One year of college-level biology. (3 cr. hr.)

BIO 690: Research in Biology

(O) Graduate independent research under faculty direction. Written report or thesis required. May be repeated for a maximum of six semester hours. Prerequisite: Consent of department. (1-6 cr. hr.)

Chemistry**CHE 500: Advanced Organic Chemistry**

(O) Reaction mechanisms, physical organic chemistry and theoretical concepts in organic chemistry; recent developments. Prerequisites: CHE 302. (3 cr. hr.)

CHE 529, 629: Special Topics in Chemistry

Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

CHE 531: Physical Chemistry I

(F) Kinetic theory of gases, thermodynamics, introductory quantum chemistry, chemical bonding. Molecular spectroscopy. Prerequisites: CHE 222, MAT 126, and PHY 202. (Also listed as PHY 531). (3 cr. hr.) ■

CHE 532: Physical Chemistry II

(S) Chemical kinetics, solid and liquid states, phase equilibria, properties of solutions and surface chemistry. Prerequisite: CHE 531. (Also listed as PHY 532). (3 cr. hr.) ■

CHE 540: Advanced Inorganic Chemistry

(F) Periodic relationships occurring among elements and their compounds. Current theories of atomic structure, bonding, acid-base behavior and coordination. Prerequisite: CHE 531. (3 cr. hr.)

CHE 607: Chemistry in Elementary School and Junior High Curriculum

(O) Various chemical topics. Typical subtitles include: Organic Chemistry, Biochemistry, Environmental Chemistry, Chemistry and Energy, Geochemistry, Agricultural Chemistry, Chemistry and the Modern World. Maximum of nine credit hours may be elected, if subtitles differ. NOTE: Not open to chemistry majors. Prerequisites: Nine hours of science, consent of department. (2-3 cr. hr.)

CHE 608: Modern Chemistry in the Secondary School Curriculum

(O) Theories, concepts in chemistry for secondary school curriculum; ways of using these ideas to promote better understanding of subject. Prerequisite: Consent of department. (3 cr. hr.)

CHE 660: Radio and Nuclear Chemistry

(O) Modern techniques of nuclear chemistry, neutron activation analysis, neutron diffraction. Prerequisite: CHE 540. (3 cr. hr.)

CHE 680: Independent Study in Chemistry

(A) Directed study or research for qualified graduate students (1-6 cr. hr.)

Geology

GLY 529, 629: Special Topics in Geology

Selected topics. May be taken more than once as subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

GLY 550: Geology of New York State

(I) Geologic history of New York State as interpreted from the rock record. Special emphasis on: Paleozoic stratigraphy and depositional environments; metamorphism, magmatism and deformation of the Adirondack and Hudson Highlands; Grenville, Taconic, Acadian, and Alleghanian orogenic events; Pleistocene continental glaciation. Seven and a half lecture hours per week; four weeks. One all-day Saturday field trip required. Prerequisite: GLY 261 or equivalent. (3 cr. hr.)

GLY 567: Advanced Geomorphology

(O) Current, classical problems in geomorphology using qualitative, quantitative approaches. Two lectures, one three-hour laboratory, field trips. Prerequisite: GLY 367. (3 cr. hr.)

GLY 570: Tectonics and Evolution

(F) Examination of the theory of plate tectonics, including critique of refereed scientific papers. An integration of various subjects within the discipline of geology to understand the physical evolution of the earth's surface and its biologic implications. One three-hour lecture and/or discussion. Prerequisite: Twelve hours of geology. (3 cr. hr.) ■

GLY 573: History of Geology

(O) Development, evolution of major concepts in geological sciences. Two lectures, selected readings, report writing. Prerequisite: Fifteen hours of geology. (2 cr. hr.)

GLY 576: Glacial Geology

(C) Glacial processes, landforms and deposits; Quaternary chronologies and dating methods; analysis and interpretation of glacial sediments and sequences. Emphasis on glaciation of New York State. One two-hour lecture, one two-hour laboratory, field trips. Prerequisite: GLY 261. (3 cr. hr.)

GLY 579: Paleoclimatology

(C) History and causes of natural climate change. Emphasis on events and environments of the last two million years. Includes analytical methods used to reconstruct paleoclimate. One three-hour lecture. Prerequisites: GLY 261 and twelve hours of geology, biology, chemistry, and/or physics at 300 level or above. (3 cr. hr.)

GLY 581: Advanced Field Geology

(M) Field investigations involving detailed geologic mapping and analysis of specific area(s) by an individual or small group; written report. Offered summers at the Brauer Field Station. Prerequisite: GLY 469. (3-8 cr. hr.)

GLY 595: Geophysical Methods

(O) Principles and instrumentation of geophysical methods used to collect and interpret data from the Earth's interior. Two lectures, one three-hour laboratory. Prerequisites: GLY 261 and either PHY 105 and PHY 106, or PHY 201 and PHY 202. (Also listed as PHY 595). (3 cr. hr.)

GLY 690: Thesis

(O) Prerequisite: Consent of department (3-6 cr. hr.)

GLY 699: Independent Research

(O) Advanced individual research into geological problems. Prerequisite: Thirty-six hours of geology. May be repeated for credit. (1-3 cr. hr.)

Physics

PHY 529, 629: Special Topics In Physics

A selected topics course which may be taken more than once as the subtitle changes. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

PHY 530: Statistical and Thermal Physics

(F) A study of the thermal properties of matter from macroscopic and molecular points of view. Topics include heat, temperature, entropy, the laws of thermodynamics, kinetic theory, ensembles and distribution functions, and classical and quantum statistics. Prerequisite: MAT 227. Corequisite: PHY 420. (3 cr. hr.) ■

PHY 531: Physical Chemistry I

(F) Kinetic theory of gases, thermodynamics, introductory quantum chemistry, chemical bonding. Molecular spectroscopy. Prerequisites: CHE 222, MAT 126, and PHY 202. (Also listed as CHE 531). (3 cr. hr.) ■

PHY 532: Physical Chemistry II

(S) Chemical kinetics, solid and liquid states, phase equilibria, properties of solutions and surface chemistry. Prerequisite: PHY 531. (Also listed as CHE 532.) (3 cr. hr.) ■

PHY 559: Advanced Physics Laboratory

(A) The development of additional techniques and skills in a special area of physics. May be repeated to perform different experiments. Prerequisites: PHY 202 or consent of department. (3 cr. hr.)

PHY 565: Solid State Physics

(S-C) The properties of solids. Topics include crystal structure, electronic and structural properties, the free-electron model, band theory, metals, semiconductors, superconductivity, and magnetism. Prerequisite: PHY 410. Corequisite: MAT 430. (3 cr. hr.) ■

PHY 570: Nuclear Physics

(O) A study of elementary nuclear theory. Topics include the properties of nuclei, radioactivity, and transmutation. Prerequisite: PHY 410. Corequisite PHY 450. (3 cr. hr.) ■

PHY 575: Introduction to Quantum Mechanics

(S-C) The study of the physical laws underlying microscopic systems. Topics include the wavelike properties of matter, the motion of wave packets, Schrodinger's equation, the solution of Schrodinger's equation in one and three dimensions, operators, expectation values, the Heisenberg uncertainty principle, the quantum harmonic oscillator, the hydrogen atom, and approximation methods. Prerequisite: MAT 430 and PHY 420. (3 cr. hr.) ■

PHY 595: Geophysical Methods

(O) Principles and instrumentation of geophysical methods used to collect and interpret data from the Earth's interior. Two lectures, one three-hour laboratory. Prerequisites: GLY 261 and either PHY 105 and PHY 106, or PHY 201 and PHY 202. (Also listed as GLY 595). (3 cr. hr.)

PHY 690: Independent Study in Physics

(O) Graduate independent study and/or research under faculty direction. A written report or thesis is required. May be repeated for not to exceed six credit hours. Prerequisite: Consent of department (1-3 cr. hr.)

Science

SCI 690: Independent Study in Science/Mathematics Education

(A) Graduate independent study and/or research in science education under faculty direction. Written report or thesis required. Fulfills the requirement for a culminating experience for a master's degree (M.A.T. or M.S.Ed in Secondary Science). Purpose, design of study determined by instructor. (3 cr. hr.)

Social Studies: Adolescence Education

Old Main, Room 212
(607) 753-2723
E-mail: raffertyb@cortland.edu
www.cortland.edu/history/

SCHOOL

Arts and Sciences

FACULTY

William Sharp (Coordinator)

PROGRAMS OFFERED

Master of Science in Education in Adolescence Education: Social Studies (7-12)

CONCENTRATIONS OFFERED

History, Geography

DESCRIPTION

The Master of Science in Education in Adolescence Education: Social Studies is intended primarily for social studies teachers in grades 7-12 seeking professional certificates or permanent certification. Since substantial graduate-level work is done either in history or geography, students may also want to use their degree for careers relevant to those academic fields.

SPECIAL FEATURES

- small graduate reading and writing seminars
- preponderance of work in subject matter areas

ADMISSION REQUIREMENTS

In addition to meeting the requirements for admission to a degree program stated in this catalog, the applicant for enrollment in the program leading to a Master of Science in Education in Adolescence Education: Social Studies (7-12) should present the following:

1. Official transcripts documenting a bachelor's degree from an accredited college or university
2. Documentation of an initial/provisional certificate (or a certificate of qualification for initial or provisional certification) in adolescence/secondary or elementary social studies issued by the New York State Education Department
3. A minimum of 18 credit hours in history or geography and a minimum of 21 credit hours combined in history and geography.
4. At least a 2.7 grade point average in the undergraduate social science major and at least a 2.5 cumulative grade point average
5. Two letters of recommendation at least one from an instructor in the student's undergraduate social science major or concentration.
6. Approval of the Social Studies Graduate Committee.

Note: Students must have at least a B average in their first six hours of course work in order to be admitted to candidacy for the degree.

Master of Science in Education

Adolescence Education: Social Studies (7-12) [SSA]

Students must choose a concentration of at least 18 hours in either history or geography and must take six hours of a cognate social science and six hours of professional education. In addition to the program requirements stated below, students must either write a master's thesis or take a written comprehensive exam based on work taken in the concentration and in professional education.

CAREER POTENTIAL

- Secondary social studies teacher
- Public history (museum, archives)
- Careers appropriate to geography or political science
- Professional schools
- Business

PROGRAM REQUIREMENTS

1. Social Science Concentration: 18 credit hours, which must include:
 - A. research and writing seminar: 3 credit hours (HIS 660, 661, 662, 663, 664)
 - B. trends in discipline course: 3 credit hours (HIS 629, 642, 646, 648, 650/GRY 640)
 - C. combining content and pedagogy courses: 9 credit hours (HIS 524, 528, 529, 530, 531, 532, 533, 538, 545, GRY 520, 529, 595)
 - D. elective course in concentration: 3 credit hours (500 or 600 level)
2. Cognate Social Science: 6 credit hours, which must include: course combining content and pedagogy (500 level) and elective social science outside concentration (500 or 600 level).
Note: At least one of the cognate social science courses must be a geography course if the concentration is history and one a history course if the concentration is geography.
3. Professional Education: 6 credit hours, which must include:
 - A. one of the following: EDU 671, 672, 673, 674, 675
 - B. education elective (with consent of advisor): 3 credit hours

TOTAL CREDIT HOURS REQUIRED: 30

Related Education Courses

EDU 644: Seminar in Teaching of Secondary Social Studies (S-M) Selected problems in curriculum, methodology; research based upon individual needs, interests. Not credited as basic methods course for certification. Prerequisite: One year teaching experience and undergraduate course in secondary social studies. (3 cr. hr.)