Graduate Study
Graduate Admissions

The State University of New York at Cortland offers you the opportunity to take courses leading to a masters of arts, a master of science, a master of science in education, a masters of arts in teaching, as well as a certificate of advanced study. The certificates of advanced study are post-baccalaureate 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 commuting students. 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 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 both the graduate and undergraduate student. 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 designed for exclusively at the graduate level for graduate students only.

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) along with the $50 application fee by the following deadlines:

<table>
<thead>
<tr>
<th>Entry Term</th>
<th>Application Due Date</th>
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</thead>
<tbody>
<tr>
<td>Fall</td>
<td>August 1</td>
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<tr>
<td>Spring</td>
<td>January 1</td>
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<tr>
<td>Summer</td>
<td>May 1</td>
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</tbody>
</table>

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 degrees 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 their academic accomplishments, ability to finance their 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 elementary education, reading 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

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.-4:30 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 291 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.

Graduate Financial Aid
Information on financial aid can be obtained from the Financial Aid Office, SUNY Cortland, PO. Box 2000, Cortland, N.Y. 13045, (607) 743-5575.

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 (12 if a TAP recipient – see note below) credit hours 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: If you receive TAP (New York State Tuition Assistance Program) funds, you must be enrolled in at least 12 semester hours during the fall and/or spring semesters. To qualify for TAP during the summer you need to register for a total of six credit hours which can be taken in either Summer Session I or Summer Session II. You also may qualify by enrolling in three credit hours during each session.

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 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 non-teaching 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 re-registered 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.
### Graduate Program Codes

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<tr>
<th>PROGRAM</th>
<th>DEGREE/CERT.</th>
<th>CODE</th>
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<td>American Civilization and Culture</td>
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<td>Conc: Reading Teacher</td>
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<td>conc: Social Studies</td>
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<td>conc: Technology</td>
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<td>Master of Science in Teaching</td>
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<tr>
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<td>Conc: Environmental and Outdoor Education</td>
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<td>Conc: Management of Leisure Services</td>
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*All New York State graduate teacher education programs are currently under review by the New York State Education Department and are subject to modification pending final approval.*
Adolescence Education

Note: All New York State graduate teacher education programs are currently under review by the New York State Education Department and are subject to modification pending approval.

SUNY Cortland offers 10 graduate certification programs that prepare candidates to teach in grades 7-12. Adolescence education programs are available in the following areas of study:

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—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—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 39 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 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). Bi-weekly 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 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 and 502, AED 601, PSY 501 or PSY 533, AED 540, EDU 549, EDU 661, HLH 510, EDU 671. (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
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

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 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 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 semester hours of course work at the 600-level.
5. A minimum B (3.0) GPA 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

All New York State graduate teacher education programs are currently under review by the New York State Education Department and are subject to modification pending approval.

FACULTY
See page 92 for a complete listing.

PROGRAMS OFFERED
M.S.T. in Childhood Education
M.S.Ed. in Childhood Education
M.S.Ed. in Literacy Education
C.A.S. in Educational Administration

M.S.T. in Childhood Education, Grades 1–6
[MST_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), mathematics, and science, and 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 or the equivalent of a language other than English
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

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., Health 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
Observation (30 clock hours) 12 credit hours
EDU 510: Inquiry into Teaching, Technology, and Research (3 cr. hr.)
EDU 511: Teaching Literacy in the Primary Grades (3 cr. hr.)
EDU 512: Teaching Elementary School Mathematics (3 cr. hr.)
EDU 513: Teaching Elementary School Science (3 cr. hr.)

B. Summer Sessions I and II
12 credit hours
I. EDU 514: Teaching Elementary Social Studies (3 cr. hr.)
   EDU Elective (3 cr. hr.)
II. Tutorial (25 clock hours) 12 credit hours
   EDU 516: Teaching Literacy in the Intermediate Grades (3 cr. hr.)
   EDU 650: Educational Assessment (3 cr. hr.)

C. Third Semester
Practicum (100 clock hours) 12 credit hours
EDU 656: Classroom Applications of Child Development (3 cr. hr.)
EDU 657: Elementary School Practicum and Research Seminar (3 cr. hr.)
EDU 658: Classroom Organization and Management: Theory and Practice (3 cr. hr.)
EDU 670: Foundations of Education (3 cr. hr.)

D. Fourth Semester
Teaching (Two six-week, full-time teaching at two levels) 15 credit hours
EDU 690: Student Teaching I (6 cr. hr.)
EDU 691: Student Teaching II (6 cr. hr.)
EDU 698: Student Teaching/Culminating Research Project Seminar (3 cr. hr.)

TOTAL CREDIT HOURS REQUIRED: 51
M.S.Ed. in Childhood Education [MSED_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 master’s degree program as stated in this catalog, students must:
1. Submit evidence of New York State Provisional Certification (or a certificate of qualification for Provisional Certification) in the appropriate area of elementary education (N-6).
2. Have an undergraduate cumulative grade point average above 2.5 on a 4.0 scale. Preference will be given to applicants with 2.8 and above GPA.

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 the Education Department’s graduate studies coordinator/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 39 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 Initial Courses: 6 credit hours
EDU 671: Issues in Foundations of Education (3 cr. hr.)
EDU 651: Understanding and Conducting Educational Research (3 cr. hr.) Prerequisite: Student Teaching

B. Required Core Courses: 15 credit hours
EDU 660: Curriculum Analysis in American Education (3 cr. hr.)
Prerequisite which may be taken concurrently: EDU 671, EDU 651
EDU 551: eLearning and the American Classroom (3 cr. hr.)
Prerequisite which may be taken concurrently: EDU 660
EDU 539: Reading and Writing Across the Curriculum (3 cr. hr.)
Prerequisite which may be taken concurrently: EDU 660
EDU 524: Democracy and Social Education (3 cr. hr.)
Prerequisite which may be taken concurrently: EDU 660
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 (3 cr. hr.)
EDU 640: Conflict and Controversy in Social Education (3 cr. hr.)
Prerequisite which may be taken concurrently: EDU 524
EDU 647: Social Education in the Digital Age (3 cr. hr.)
Prerequisite which may be taken concurrently: EDU 524
EDU 652: Master’s Project (3 cr. hr.)
Prerequisite: Completion of 30 hours of coursework

MATH AND SCIENCE STRAND
One arts and sciences graduate elective at 500-600 level (3 cr. hr.)
EDU 610: Advanced Topics in Mathematics Education (3 cr. hr.)
Prerequisite which may be taken concurrently: EDU 522
EDU 648: Seminar in Elementary Science Education (3 cr. hr.)
Prerequisite which may be taken concurrently: EDU 522
EDU 652: Master’s Project (3 cr. hr.)
Prerequisite: Completion of 30 hours of coursework

TECHNOLOGY SPECIALIST STRAND
One arts and sciences graduate elective at 500-600 level (3 cr. hr.)
GRY 520: Maps in the Classroom (3 cr. hr.)
EDU 630: New Media in the Classroom (3 cr. hr.)
Prerequisite: EDU 551
EDU 652: Master’s Project (3 cr. hr.)
Prerequisite: Completion of 30 hours of coursework

TOTAL CREDIT HOURS REQUIRED: 33

M.S.Ed. in Literacy Education [MSED_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 6-12

ADMISSION REQUIREMENTS
In addition to meeting the requirements for admission to a degree program as stated in this catalog, students must submit:
1. Evidence of having completed the requirements for an initial classroom teaching certificate in another certificate title.
2. Evidence of meeting the recommended minimum of 2.8 undergraduate GPA on a scale of 4.0.
3. A typewritten statement demonstrating a commitment to and interest in literacy education, as well as the ability to write clearly and well. The statement will respond to the following questions:
   • Why do you wish to pursue the degree in literacy education?
   • In what way will this degree support your long-term professional goals?
   • Calkin’s (1994) noted that to be a teacher of reading and writing, one must be a reader and a writer oneself. Describe your views about this statement and indicate something about yourself as a reader and writer.

Before beginning coursework, 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 coursework and must establish candidacy for the degree between their sixth and 15th hour of coursework.

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 Education Department’s graduate studies coordinator/advisor.

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 39 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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 528</td>
<td>Language and Literacy Development</td>
<td>3 cr. hr.</td>
</tr>
<tr>
<td>EDU 580</td>
<td>Literacy and Society</td>
<td>3 cr. hr.</td>
</tr>
<tr>
<td>EDU 651</td>
<td>Understanding and Conducting Educational Research</td>
<td>3 cr. hr.</td>
</tr>
<tr>
<td>EDU 540</td>
<td>Current Practices in Literacy Assessment and Instruction B-Grade 6</td>
<td>4 cr. hr.</td>
</tr>
<tr>
<td>EDU 628</td>
<td>Children’s Literature in the Curriculum</td>
<td>3 cr. hr.</td>
</tr>
<tr>
<td>EDU 680</td>
<td>Assessment and Instruction of Learners Experiencing Literacy Difficulties Grades 5-12</td>
<td>4 cr. hr.</td>
</tr>
<tr>
<td>EDU 693</td>
<td>The Literacy Practicum and Seminar</td>
<td>4 cr. hr.</td>
</tr>
<tr>
<td>EDU 669</td>
<td>The Literacy Specialist and The Literacy Program</td>
<td>3 cr. hr.</td>
</tr>
<tr>
<td>EDU 653</td>
<td>The Masters’ Project in Literacy Education</td>
<td>3 cr. hr. or</td>
</tr>
<tr>
<td>EDU 669</td>
<td>The Masters’ Thesis</td>
<td>6 cr. hr.</td>
</tr>
</tbody>
</table>

One from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPE 510</td>
<td>Teaching the Special Education Learner in the General Education Classroom</td>
</tr>
<tr>
<td>EDU 525</td>
<td>Teaching the Inner City Child</td>
</tr>
<tr>
<td>WST 552</td>
<td>Gender Issues in Education</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 528</td>
<td>Language and Literacy Development</td>
<td>3 cr. hr.</td>
</tr>
<tr>
<td>EDU 580</td>
<td>Literacy and Society</td>
<td>3 cr. hr.</td>
</tr>
<tr>
<td>EDU 651</td>
<td>Understanding and Conducting Educational Research</td>
<td>3 cr. hr.</td>
</tr>
<tr>
<td>EDU 550</td>
<td>Current Practices in Literacy Assessment and Instruction Grades 5-12</td>
<td>4 cr. hr.</td>
</tr>
<tr>
<td>EDU 649</td>
<td>Young Adult Literature</td>
<td>3 cr. hr.</td>
</tr>
<tr>
<td>EDU 681</td>
<td>Assessment and Instruction of Learners Experiencing Literacy Difficulties Grades 5-12</td>
<td>4 cr. hr.</td>
</tr>
<tr>
<td>EDU 693</td>
<td>The Literacy Practicum and Seminar</td>
<td>4 cr. hr.</td>
</tr>
<tr>
<td>EDU 669</td>
<td>The Literacy Specialist and The Literacy Program</td>
<td>3 cr. hr.</td>
</tr>
<tr>
<td>EDU 653</td>
<td>The Masters’ Project in Literacy Education</td>
<td>3 cr. hr. or</td>
</tr>
<tr>
<td>EDU 669</td>
<td>The Masters’ Thesis</td>
<td>6 cr. hr.</td>
</tr>
</tbody>
</table>

**TOTAL CREDIT HOURS REQUIRED: 33-36**

**Educational Administration**

The Certificate of Advanced Study (CAS) 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 (CAS) 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 in School Administrator Supervisor [CAS_SBA]

A. Required Courses: 24 credit hours
- EDA 657: Foundations of Education Administration
- EDA 615: Education Law
- EDA 655: Administration of School Personnel
- EDA 613: School Business Management

B. Elective Courses: 6-9 credit hours
- EDA 616: Administration of School Curriculum
- EDA 678: Principles of Supervision

C. Administrative Internship: 3-6 credit hours

TOTAL CREDIT HOURS REQUIRED: 30

Certificate of Advanced Study in School Business Administrator [CAS_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 655: Administration of School Personnel
- EDA 657: Foundations of Education Administration

B. Elective Courses: 6-9 credit hours
- EDA 616: Administration of School Curriculum

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 preservice 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 preservice 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 preK-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.)

Course codes: A = every semester, B = at least once per year, C = at least once every two years, F = fall, M = summer, O = occasionally, S = spring, W = winter, ■ = LAS
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 510, 511, 512 and 513, 514. (3 cr. hr.)

EDU 521: Elementary School Language Arts
(B) 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. Prerequisite which may be taken concurrently: EDU 660. (3 cr. hr.)

EDU 523: Elementary School Science
(B) 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. Prerequisite which may be taken concurrently: EDU 660. (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 529: Elementary School Reading
(A, M) Developmental reading concepts. Trends, research studies. Prerequisite: Student Teaching. (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
(B) Extension of EDU 522, introduces additional math concepts including informal geometry, metrics, number patterns, probability. Prerequisite: Student teaching. (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. Prerequisite which may be taken concurrently: EDU 660 (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: eLearning 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. Prerequisite which may be taken concurrently: EDU 660. (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 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.)

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: Adolescence Education, English 7-12 program. (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: Adolescence Education, English 7-12 program. (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
(B) 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) Examination of curriculum; 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) Workshop 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) Model programs, underlying theories of learning and development. Overall curriculum design, continuity from preschool to upper program. Practicum, field trips to different types of programs. (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 Teaching of Secondary Foreign Languages
(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. 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 522. (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 masters 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: 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: 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 655: 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 510, 511, 512, 513, 514, 516, 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 510, 511, 512, 513, 514, 516, 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 510, 511, 512, 513, 514, 516, 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. Prerequisites which may be taken concurrently: EDU 671, EDU 651. (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 socio-economic 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**
(B) 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. The literacy specialist as both initiator and implementer of literacy programs is emphasized. Prerequisites: EDU 528; EDU 504 or 550; EDU 680 or 681; EDU 693 (may be concurrent). (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 510, 511, 512, 513, 514, 516, 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**
(B) Role, basic issues of education in contemporary American society. (3 cr. hr.)

**EDU 674: History of American Education**
(B) 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 specialists or literacy supervisors. Prerequisites: EDU 528; EDU 540. (Also listed as SPE 680.) (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 the 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. (3 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.)

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Course codes: A = every semester, B = at least once per year, C = at least once every two years, F = fall, M = summer, O = occasionally, S = spring, W = winter, ■ = LAS
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 510, 511, 512, 513, 514, 516, 656, 657, 658, 670. (3 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 510, 511, 512, 513, 514, 516, 657, 658, 670, 690. (3 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 through 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 EDU 550; EDU 680 or EDU 681; EDU 629 or EDU 649. (4 cr. hr.)

EDU 694: Practicum in Corrective Reading
(A, M) Student analyzes needs of a pupil, works with pupil daily under supervision. Development, evaluation of techniques for classroom situations. For teachers, reading consultants, supervisors. Prerequisite: EDU 639. (3 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 ad 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. Corequisites with EDU 690 and 691. Prerequisites: EDU 510, 511, 512, 513, 514, 516, 650, 656, 657, 658, 670. (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: Consent of department, completion of 24 hours of course work. (6 cr. hr.)

Education Administration Courses

EDU 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.)

EDU 613: School Business Management
(C) Administration, management of business phase in public schools. (3 cr. hr.)

EDU 615: Education Law
(B) Statute, quasi-law as they affect personnel, students, operation of public schools. (3 cr. hr.)

EDU 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.)

EDU 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. Prerequisite: Completion of EDA 657. Students must complete the Administrative Field Experience prior to the completion of 9 hours of EDA course work. (3 cr. hr.)

EDU 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.)

EDU 650: Evaluation in Public Schools
(B) Measurement, evaluation of pupils, curriculum. Note: Students who have taken an undergraduate course in measurement and evaluation should take EDU 651. (Also listed as EDU 650.) (3 cr. hr.)

EDU 655: Administration of School Personnel
(B) Organization, administration of school personnel; specific responsibilities, leadership role of administrator. Prerequisite: EDA 657. (3 cr. hr.)

EDU 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.)

EDU 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.)

EDU 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.)

EDU 678: Principles of Supervision
(B) Concepts, objectives of supervision, organization of supervisory programs, techniques of supervision. Prerequisite: EDA 657. (3 cr. hr.)
ED 679: School Improvement Planning/Effective Schools  
(O) Focus on developing leadership role for administrators in  
school improvement planning using the Effective Schools Model.  
Prerequisite: EDA 657. (3 cr. hr.)

ED 680: The School Principal  
(C) Role, responsibilities of administrator; school organization,  
professional ethics, school-community relationship. Prerequisite:  
EDA 657. (3 cr. hr.)

ED 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. Prerequisites: EDA 615, 655, 657. (3 cr. hr.)

ED 682: Organizational Development  
(O) Processes for building, improving and maintaining effective  
ownizations and the role of leadership in such efforts. Prerequisites:  
Completion of EDA 655, 678. (3 cr. hr.)

ED 683: Administration of Special Education  
(O) CSE, placement, pre-school, curriculum, law, finance,  
supervision. Prerequisite: EDA 657. (Also listed as SPE 683).  
(3 cr. hr.)

ED 684: Seminar in Educational Administration  
(C) Current purpose, problems of secondary school curriculum,  
students, staff, community, plant, activities. Prerequisites: EDA  
655, 657, 678. (3 cr. hr.)

ED 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.)

ED 686: Technology in School Administration  
(O) Applications of technology in educational administration:  
planning, research, communication, publishing, presentations.  
(3 cr. hr.)

ED 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.)

ED 689: 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: Candidacy  
in program, completion of five core courses, and 21 hours in the  
program. (3-6 cr. hr.)
English Department

All New York State graduate teacher education programs are currently under review by the New York State Education Department and are subject to modification pending approval.

Faculty
See page 102 for a complete listing.

Programs Offered
M.A. in English
M.A.T. in Adolescence Education: English 7-12
M.S.Ed. in Adolescence Education: English 7-12

Master of Arts in 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 532: Middle English Literature or
ENG 601: History of the English Language
One course in 16th or 17th century British Literature
One course in 18th or 19th century British Literature
One course in 20th century British or American Literature
One other course in American Literature
ENG 572: Seminar in Literary Criticism
12 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

TOTAL CREDIT HOURS REQUIRED: 30

M.A.T. in Adolescence Education: ENG 7-12 [AEE]
The Master of Arts in Teaching (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 credit 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 Master of Arts in Teaching (M.A.T.) in Adolescence Education: English (7-12) should present the following:
1. At least a B average in undergraduate English courses.
2. A GPA 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 coordinator of adolescence education. 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**

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 EDU 663 Research in the Teaching of English.

EDU 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 M.A.T. 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 25- to 30-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 12 credit hours in the pedagogical core, including ENG 502, EDU 541, EDU 662, and EDU 585, and six credit hours in the content core.

**COURSE OF STUDY**

**A. Pedagogical Core: 34-35 credit hours**

Students are required to take the courses listed below. ENG 502, EDU 541, EDU 662, and EDU 585 must be completed before student teaching.

ENG 502: Seminar in the Composing Process: Rhetoric and Analysis—includes 30 credit hours of fieldwork (4 cr. hr.)
EDU 541: Teaching Literature and Critical Literacy (3 cr. hr.)
EDU 662: Language Development in Adolescents—includes 30 hours of fieldwork (4 cr. hr.)
EDU 585: Participant/Observer Experience—includes 40 hours of fieldwork (1 cr. hr.)
EDU 663: Seminar in Research in the Teaching of English (3 cr. hr.)
EDU 671: Issues in Foundations of Education (3 cr. hr.)
EDU 586: Practicum I: Student Teaching in the Middle School (7 cr. hr.)
EDU 587: Practicum II: Student Teaching in the Secondary School (7 cr. hr.)

One of the following health courses:
- HLH 110 Personal and Community Health (3 cr. hr.)
- HLH 199 Critical Health Issues (2 cr. hr.)
- HLH 265 Health and the Child (3 cr. hr.)
- HLH 510 Proseminar in Health Foundations (3 cr. hr.)
- Child Abuse Workshop (0 cr. hr.)
- Preventing School Violence Workshop (0 cr. hr.)

**B. Content Core: 15 credits**

Students are required to take a minimum of five courses in literature and/or rhetoric. These courses are selected in consultation with an advisor in 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 credit hours must be taken in courses at the 600 level. Depending on students’ background, students will 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 (3 cr. hr.)
  - ENG 616: Studies in American Literature 1900 to 1950 (3 cr. hr.)
  - ENG 617: Studies in American Literature since 1950 (3 cr. hr.)
  - ENG 622: Seminar in American Women Writers (3 cr. hr.)

- One course in Literature before 1800
  - ENG 500: Old English (3 cr. hr.)
  - ENG 530: Chaucer (3 cr. hr.)

- One course in Seventeenth-Century British Literature
  - ENG 538: Studies in Seventeenth-Century British Literature (3 cr. hr.)
  - ENG 539: Milton (3 cr. hr.)

- One course in World Literature
  - ENG 622: Seminar in Shakespeare (3 cr. hr.)

- One course in the Victorian Era
  - ENG 646: Studies in the Victorian Era (3 cr. hr.)

- One course in the 20th Century
  - ENG 615: Studies in American Literature to 1900 (3 cr. hr.)

**TOTAL CREDIT HOURS REQUIRED: 49**
### Example of the M.A.T. in Adolescence Education: English 7-12 over two years

<table>
<thead>
<tr>
<th>First Year</th>
<th>Second Year</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td></td>
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<tr>
<td>EDU 541: Teaching Literature and Critical Literacy (3 cr. hr.)</td>
<td>EDU 585: Participant/Observer Experience (1 cr. hr.)</td>
</tr>
<tr>
<td>ENG 502: Seminar in the Composing Process (includes 30 hrs. field experience) (4 cr. hr.)</td>
<td>EDU 586: Practicum I Student Teaching in the Middle School (7 cr. hr.)</td>
</tr>
<tr>
<td>EDU 662: Language Development in Adolescents (includes 30 hrs. field experience) (4 cr. hr.)</td>
<td>EDU 587: Practicum II Student Teaching in the Secondary School (7 cr. hr.)</td>
</tr>
<tr>
<td>HLH course (2-3 cr. hr.)</td>
<td>Total: 15 cr. hr.</td>
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<td>Total: 13-14 cr hr.</td>
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<thead>
<tr>
<th><strong>Spring</strong></th>
<th><strong>Summer</strong></th>
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<tbody>
<tr>
<td>EDU 663: Research in the Teaching of English (3 cr. hr.)</td>
<td>ENG Elective (3 cr. hr.)</td>
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<tr>
<td>ENG Elective (3 cr. hr.)</td>
<td>ENG Elective (3 cr. hr.)</td>
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<tr>
<td>ENG Elective (3 cr. hr.)</td>
<td>Total: 6 cr. hr.</td>
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<td>Total: 7 cr hr.</td>
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* The following required courses are offered only in the fall semester: ENG 502, EDU 541 and EDU 662.

### Example of the M.A.T. in Adolescence Education: English 7-12 over three years

<table>
<thead>
<tr>
<th>First Year</th>
<th>Second Year</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
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</tr>
<tr>
<td>EDU 541: Teaching Literature and Critical Literacy (3 cr. hr.)</td>
<td>EDU 662: Language Development in Adolescents (includes 30 hrs. field experience) (4 cr. hr.)</td>
</tr>
<tr>
<td>ENG 502: Seminar in the Composing Process (includes 30 hrs. field experience) (4 cr. hr.)</td>
<td>HLH course (2-3 cr. hr.)</td>
</tr>
<tr>
<td>EDU 662: Language Development in Adolescents (includes 30 hrs. field experience) (4 cr. hr.)</td>
<td>Total: 6 cr. hr.</td>
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<tr>
<td>HLH course (2-3 cr. hr.)</td>
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<td>Total: 15 cr. hr.</td>
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<table>
<thead>
<tr>
<th><strong>Spring</strong></th>
<th><strong>Summer</strong></th>
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<tbody>
<tr>
<td>EDU 663 Research in the Teaching of English (3 cr. hr.)</td>
<td>ENG Elective (3 cr. hr.)</td>
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<tr>
<td>ENG Elective (3 cr. hr.)</td>
<td>ENG Elective (3 cr. hr.)</td>
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<tr>
<td>ENG Elective (3 cr. hr.)</td>
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<th><strong>Third Year</strong></th>
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<tr>
<td><strong>Fall</strong></td>
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<tr>
<td>ENG Elective (3 cr. hr.)</td>
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</table>

* EDU 663 is offered only in the spring semester.
M.S.Ed. in Adolescence Education-ENG 7-12 [AEE]
The Master of Science in Education (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 32 credit hours of approved graduate study as described hereafter is required for the M.S.Ed. 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. A B.A. or B.S. from an accredited institution
2. At least a B average in an undergraduate major in English, comparative literature or rhetoric and composition
3. An initial certificate (or certificate of qualification) in adolescence education: English 7-12
4. At least a 2.5 cumulative average in all undergraduate courses
5. 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.
6. Two letters of reference
7. Approval of the Graduate English Committee
8. A minimum of 24 hours of approved undergraduate courses in English, comparative literature or rhetoric and composition
9. An interview with the coordinator of the M.S.Ed. 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 coordinator of the M.S.Ed. Program.

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
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 EDU 663: Research in the Teaching of English.
EDU 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 25- to 30-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: 14 credits
Students are required to take 14 credit hours of courses that link content and pedagogy.
- ENG 502: Seminar in the Composing Process: Rhetoric and Analysis—includes 30 credit hours of fieldwork (4 cr. hr.)
- EDU 541: Teaching Literature and Critical Literacy (3 cr. hr.)
- EDU 662: Language Development in Adolescents—includes 30 hours of fieldwork (4 cr. hr.)
- EDU 663: Seminar in Research in the Teaching of English (3 cr. hr.)

B. Content Core: 18 credits
Students are required to take a minimum of six courses in literature and/or rhetoric. These courses are selected in consultation with the coordinator of the M.S.Ed. Program. 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 will 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 (3 cr. hr.)
- ENG 616: Studies in American Literature 1900 to 1950 (3 cr. hr.)
- ENG 617: Studies in American Literature since 1950 (3 cr. hr.)
- ENG 622: Seminar in American Women Writers (3 cr. hr.)

One course in Literature before 1800
- ENG 500: Old English (3 cr. hr.)
- ENG 530: Chaucer (3 cr. hr.)
- ENG 538: Studies in Seventeenth-Century British Literature (3 cr. hr.)
- ENG 539: Milton (3 cr. hr.)
- ENG 632: Middle English Literature (3 cr. hr.)
- ENG 636: Seminar in Shakespeare (3 cr. hr.)
- ENG 640: Studies in English Literature 1660-1800 (3 cr. hr.)

One course in British and/or Irish Literature
- ENG 500: Old English (3 cr. hr.)
- ENG 530: Chaucer (3 cr. hr.)
- ENG 538: Studies in Seventeenth-Century British Literature (3 cr. hr.)
- ENG 539: Milton (3 cr. hr.)
- ENG 547: 19th Century British Women Writers (3 cr. hr.)
- ENG 549: Studies in Irish Literature (3 cr. hr.)
- ENG 632: Middle English Literature (3 cr. hr.)
- ENG 636: Seminar in Shakespeare (3 cr. hr.)
- ENG 640: Studies in English Literature 1660-1800 (3 cr. hr.)
- ENG 645: Studies in the Romanic Era (3 cr. hr.)
- ENG 646: Studies in the Victorian Era (3 cr. hr.)
- ENG 677: Studies in Contemporary British Literature (3 cr. hr.)

One course in World Literature with emphasis on authors and authors of color
- ENG 618: Global Multicultural Literature (3 cr. hr.)
- ENG 678: World Drama (3 cr. hr.)
One course in Literature for Young Adults with emphasis on women authors and authors of color
ENG 619: Seminar in Literature for Adolescents (3 cr. hr.)

One course in technology
ENG 506: Computers and the Study of English (3 cr. hr.)

Students who have met the content distribution may select additional courses from among the following electives:
ENG 529, 629: Special Topics (3 cr. hr.)
ENG 601: History of the English Language (3 cr. hr.)
ENG 602 Rhetorical Tradition: Connecting Reading and Writing (3 cr. hr.)
ENG 699 Independent Study (1-6 cr. hr.)

TOTAL CREDIT HOURS REQUIRED: 32

Middle Childhood Extension (Gr 5-6)
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. Students with the extension are required to fulfill a minimum of 38 credit hours of graduate study.

### 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**
(O) The seminar is an experimental and theoretical approach to the teaching of writing, focusing on research, theory, and practice. Three class hours, one two-hour field experience. (3 cr. hr.)

**ENG 506: Computers and the Study of English**
(F-C) 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. Students examine how technology applies to the process of teaching and learning literature, language, and writing; study the directions the new technologies are taking texts, research, scholarship, and teaching; and assess technology’s impact on the field of English. (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**
(B) 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 British 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.)

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**Example of the M.S.Ed. in Adolescence Education: English 7-12 over two years**

<table>
<thead>
<tr>
<th>First Year</th>
<th>First Year</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td><strong>Spring</strong></td>
</tr>
<tr>
<td>EDU 541: Teaching Literature and Critical Literacy (3 cr. hr.)</td>
<td>EDU 663: Research in the Teaching of English (3 cr. hr.) *</td>
</tr>
<tr>
<td>ENG 502: Seminar in the Composing Process (includes 30 hrs. field experience) (4 cr. hr.)</td>
<td>ENG Elective (3 cr. hr.)</td>
</tr>
<tr>
<td>EDU 662: Language Development in Adolescents (includes 30 hrs. field experience) (4 cr. hr.)</td>
<td>ENG Elective (3 cr. hr.)</td>
</tr>
<tr>
<td>HLH course (2-3 cr. hr.)</td>
<td>ENG Elective (3 cr. hr.)</td>
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<td>Total: 13-14 cr hr.</td>
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<tr>
<th>Second Year</th>
<th>Second Year</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td><strong>Spring</strong></td>
</tr>
<tr>
<td>EDU 585: Participant/Observer Experience (1 cr. hr.)</td>
<td>ENG Elective (3 cr. hr.)</td>
</tr>
<tr>
<td>EDU 586: Practicum I Student Teaching in the Middle School (7 cr. hr.)</td>
<td>ENG Elective (3 cr. hr.)</td>
</tr>
<tr>
<td>EDU 587: Practicum II Student Teaching in the Secondary School (7 cr. hr.)</td>
<td>EDU 671: Issues in Foundations of Education (3 cr. hr.)</td>
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<td>Complete: Master’s thesis, Portfolio, Preventing School Violence Workshop</td>
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<td>Total: 9 cr. hr.</td>
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</table>

* EDU 663 is offered only in the spring semester.
ENG 539: Milton
(B) Poetry and prose. (3 cr. hr.)
ENG 541: Teaching Literature and Critical Literacy
(B) 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 GPA in the major. (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 literary movements in Irish literature, such as Irish Renaissance. May be repeated as subtitle changes. (3 cr. hr.)
ENG 572: Seminar in Literary Criticism
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). (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
(S-C) 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
(B) Close readings of representative texts by major contemporary writers of color from around the world. (3 cr. hr.)
ENG 619: Seminar in Literature for Adolescents
(C) 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
(C) Intensive 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 writers in England, Ireland in Victorian Age, 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 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 680: Bibliography and Methods of Literary Research
(O) Approaches to literature study; evaluation of evidence, nature of scholarly writing, training in bibliography. (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

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 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 socio-economic 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.)
All New York State graduate teacher education programs are currently under review by the New York State Education Department and are subject to modification pending approval.

FACULTY
See page 131 for a complete listing.

PROGRAMS OFFERED
M.S. Ed. in Health Education

M.S.Ed. in Health Education [MSED_HEC]
The Health Department's graduate degree in health education builds on the philosophical and theoretical foundations of its undergraduate program, and focuses on the development of more advanced background, skills, and competencies related to health education practice. It serves individuals who are seeking advanced preparation to meet State Education Department certification requirements and others who are seeking graduate level preparation in order to function in health education roles in community and school settings.

CAREER POTENTIAL
- School health educator
- Health educator in community agencies
- Health educator at college or university level
- Prevention specialist in school and community agencies

DEGREE COMPLETION OPTIONS
- Twenty-four to twenty-five credits of courses and a five- to six-credit thesis
- Twenty-seven to twenty-eight credits of courses and two to three-credit research project
- Thirty credits of courses and a comprehensive examination

A. Required Courses: 9 credit hours
   EDU 631: Curriculum Construction in Health Education
   EDU 632: Seminar in Health Education
   HLH 601: Research Methods in Health Education

B. Other: 21 credit hours
   Education or psychology elective — 3 credit hours
   Health electives — 12 credit hours
   Liberal Arts electives — 6 credit hours

TOTAL CREDIT HOURS REQUIRED: 30

In addition to meeting the general requirements for admission to a graduate degree program stated in the catalog, the applicant for enrollment in the program leading to an M.S.Ed. degree in health education 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.

Students who do not meet the 2.8 entry level GPA may be considered for admission at a later date once they have demonstrated the ability to perform at the graduate level by completing nine credits of approved graduate coursework and achieving a cumulative GPA of 3.0 across those credits.

Note: 1. Any additional requirements for the award of the degree (such as anatomy and physiology, health content background coursework, teaching methodology coursework, and student teaching) are determined on an individual basis after a review of the student's undergraduate coursework. This information must be ascertained by the student in consultation with the Health Department's coordinator of graduate studies.

2. Students who have not completed a three-credit undergraduate course in human sexuality and a three-credit course in drug education must take HLH 630 and HLH 509 as part of their health electives in the program.

Students enrolled in this program must be finished with all requirements (including comprehensive examination, project or thesis) by December 2003. A new program for teacher certification students will be instituted in September 2002 and will be available for all health education teacher certification students from that date forward. Present students who do not meet the December 2003 deadline will have to meet the new program requirements. Any student with questions about this issue should contact the Health Department coordinator of graduate studies.
Health

GRADUATE COURSES

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/arsen 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) 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 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 interventive community health models and violence-related legislation will be examined. Prerequisites: 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. Prerequisite: HLH 110. (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.)

Course codes: A = every semester, B = at least once per year, C = at least once every two years, F = fall, M = summer, O = occasionally, S = spring, W = winter, ■ = LAS
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 Science  
(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. Prerequisite: HLH 601. (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. Prerequisite: HLH 599 or the equivalent. (3 cr. hr.)

Related Education Courses

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.)
FACULTY
See page 140 for a complete listing.

PROGRAMS OFFERED
M.A. in History
M.S.Ed. in Adolescence Social Studies

CONCENTRATIONS OFFERED
M.A. in History: United States, Europe, Non-Western
M.S.Ed. 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

M.A. in 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 graduate degree program stated in this catalog, the applicant for enrollment in the master's degree 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. (In exceptional cases this minimum may be waived).
3. At least a 3.0 average (on a 4.0 scale) in history undergraduate courses
4. At least a 2.75 average in all undergraduate courses.
5. Satisfactory scores on the general aptitude sections of the Graduate Record Examination.
6. Two letters of recommendation, at least one from a history instructor.
7. Approval by the History Department's Graduate Committee

A. 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

M.S.Ed. in Adolescence Social Studies [SSA]

ADMISSION AND PROGRAM REQUIREMENTS
(See under Social Studies: Adolescence Education)
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 hours.

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 in the appropriate area, either American, European, or non-Western, 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.)

Course codes: A = every semester, B = at least once per year, C = at least once every two years, F = fall, M = summer, O = occasionally, S = spring, W = winter, ■ = LAS
All New York State graduate teacher education programs are currently under review by the New York State Education Department and are subject to modification pending approval.

FACULTY
See page 150 for a complete listing.

PROGRAMS OFFERED
M.S.Ed. in French, Secondary Education

M.S.Ed. in French, Secondary Education [SFR]
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 graduate program stated in this catalog, the applicant for enrollment in the program leading to a master of science in education degree in secondary French should hold provisional or initial certification in French.

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 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 credit 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 242-245.

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, WWW, and real-time communication. Prerequisites: Advanced grammar and composition courses in the target language, CAP 100, or CAP 110 and CAP 111, consent 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 French 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 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. Prerequisite: FRE 309. (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. Prerequisites: FRE 309. (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. Prerequisite: Two semesters from FRE 306, 315, 316, 318. (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. (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) Individual work under direction of student’s major adviser. May be repeated as subtitle changes. (3 cr. hr.)

Spanish

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 and/or Spanish American 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.)

Course codes: A = every semester, B = at least once per year, C = at least once every two years, F = fall, M = summer, O = occasionally, S = spring, W = winter, = LAS
All New York State graduate teacher education programs are currently under review by the New York State Education Department and are subject to modification pending approval.

FACULTY
See page 164 for a complete listing.

PROGRAMS OFFERED
M.A.T. in Adolescence Education — Mathematics
M.S.Ed. in Adolescence Education — Mathematics
M.S.Ed. in Adolescence Education — Physics and Mathematics

All New York State teacher education programs are currently under review by the New York State Education Department and are subject to modification pending approval.

M.A.T. in Adolescence Education—Mathematics [AEM]
This program leads to the Master of Arts in Teaching 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 the College admission requirements, applicants for this program must present the following:

1. A bachelor of arts or bachelor of science degree with adequate preparation in mathematics (30 hours of approved mathematics courses (calculus I and above) similar in content to Cortland’s undergraduate mathematics program with a minimum grade point average of 2.5). Note: If students do not have an adequate preparation in mathematics, they may be admitted into the M.A.T. program on a qualified basis.
2. A cumulative grade point average of at least 2.5 in all undergraduate courses.
3. Two letters of recommendation from professors or professional colleagues that address the prospective student’s suitability for adolescence school teaching.

A. Required Core in Mathematics: 12 credit hours
   * MAT 501: Fundamental Concepts of Mathematics (3 cr. hr.)
   * MAT 502: Applied Concepts in Adolescence Mathematics (3 cr. hr.)
   MAT 603: Real Analysis and Concepts of Calculus (3 cr. hr.)
   MAT 604: Algebraic Structures II (3 cr. hr.)

B. Required Core in Professional Preparation: 36 credit hours
   * AED 540: Technologies in the Adolescence Mathematics Classroom (3 cr. hr.)
   * EDU 600: The Secondary School (3 cr. hr.)
   * EDU 549: Reading in the Secondary School (3 cr. hr.)
   * EDU 661: Language Development in Adolescents for Non-Literature Majors (3 cr. hr.)
   * HLH 510: Proseminar in Health Foundations (3 cr. hr.)
   * EDU 671: Philosophy of Education (3 cr. hr.)

   * 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 39 in this catalog.

TOTAL CREDIT HOURS REQUIRED: 48

M.S.Ed. in Adolescence Education in Mathematics [AEM]
This program leads to the Master of Science in Education 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.

All graduate teacher education programs are currently under review by the New York State Education Department and are subject to modification pending approval.

CAREER POTENTIAL
• Mathematics teacher, high school or junior high school
• Curriculum coordinator
• Educational administrator

ADMISSION REQUIREMENTS
In addition to the College admission requirements, applicants for this program must present the following:

1. A New York State Initial or Provisional Certification (or a certificate of qualification for Initial or Provisional Certification) in adolescence mathematics education.
2. A cumulative grade point average of at least 2.5 in adolescence mathematics.
3. A cumulative grade point average of at least 2.5 in all undergraduate courses.
4. Two letters of recommendation from professors, professional colleagues, or employers that address the prospective students' success as a classroom teacher or their suitability for adolescence school teaching.

A. Required Core in Mathematics: 12 credit hours
   MAT 501: Fundamental Concepts of Mathematics (3 cr. hr.)
   MAT 502: Applied Concepts in Adolescence Mathematics (3 cr. hr.)
   MAT 603: Real Analysis and Concepts of Calculus (3 cr. hr.)
   MAT 604: Algebraic Structures II (3 cr. hr.)

B. Required Core in Professional Preparation: 9 credit hours
   AED 540: Technologies in the Adolescence Mathematics Classroom (3 cr. hr.)
   EDU 642: Seminar in Teaching Adolescence Mathematics (3 cr. hr.)
   EDU 671: Philosophy of Education
   PSY 501: Advanced Educational Psychology
   PSY 533: Advanced Developmental Psychology

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

C. Electives: 9 credit hours
   1. Students elect six credit hours from MAT 5xx or MAT 6xx 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

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. Students with the extension are required to fulfill a minimum of 33-36 credit hours of graduate study.

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

1. Provisional/initial certification to teach physics and mathematics in grades 7-12. (Must have at least 30 hours of course work in each content area.)
2. At least a 2.5 overall GPA in all undergraduate courses.
3. Three letters of recommendation from professors and/or professional colleagues and employers that address the prospective student's success as a classroom teacher or his/her suitability for teaching physics and mathematics in grades 7-12.
4. Interview with the adolescence education science coordinator.

PROGRAM REQUIREMENTS

OPTION I: (without middle childhood extension)
A. Content: (24 credit hours in physics and mathematics)
   12 credit hours in graduate physics
   12 credit hours in graduate mathematics

B. Pedagogy: (3 credit hours)
   AED 540: Technologies in the Adolescence Mathematics Classroom (3 cr. hr.)

C. Culminating Master’s Project (3 credit hours)
   SCI 690: Independent Study in Science/Mathematics Education (3 cr. hr.)

TOTAL CREDIT HOURS REQUIRED FOR OPTION I: 30

OPTION II: (Leads to middle childhood extension for grades 5-6)
A. Content: (24 credit hours in physics and mathematics)
   12 credit hours in graduate physics
   12 credit hours in graduate mathematics

B. Pedagogy: (6 credit hours)
   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. Students with the extension are required to fulfill a minimum of 36 credit hours of graduate study.
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 420. (3 cr. hr.)

MAT 558: Mathematical Statistics
(O) Selected topics in mathematical statistics. Prerequisite: MAT 446. (3 cr. hr.)

MAT 567: Topology I
(O) Basic concepts; point-set topology, metric spaces, topological spaces, connectedness, compactness. Prerequisite: MAT 420. (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. Prerequisites: MAT 420, MAT 501, MAT 502. (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 370, MAT 501, MAT 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 MSED 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 and 502, AED 601, PSY 501 or PSY 533, AED 540, EDU 549, EDU 661, HLH 510, EDU 671. (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

All New York State graduate teacher education programs are currently under review by the New York State Education Department and are subject to modification pending approval.

FACULTY
See page 180 for a complete listing.

PROGRAMS OFFERED
M.S.Ed. in Physical Education

Master of Science in Education (M.S.Ed.) Physical Education [MSED_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
All candidates for admission to this program must provide evidence that they have met the following criteria:
1. Documentation of a B.S.E. degree 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
   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 concluding 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. (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 non-physical 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 non-physical 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. (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 adviser. (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) This 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, rubrics, affective assessment and the development of cognitive tests and grading will be addressed. Prerequisite: PED 434 or consent of instructor. (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. (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. Prerequisites: PED 434 or equivalent. (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 provides 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 Behavioralist 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 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 652: 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 653: Assessment of Curricula and Instruction in Physical Education
(B) This 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, rubrics, affective assessment and the development of cognitive tests and grading will be addressed. Prerequisite: PED 434 or consent of instructor. (3 cr. hr.)

PED 654: 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. (3 cr. hr.)

PED 655: 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 656: 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.)
Recreation and Leisure Studies

DEPARTMENT

FACULTY
See page 204 for a complete listing.

PROGRAMS OFFERED
M.S. in Recreation
M.S.Ed. 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

M.S. in Recreation [REC]

ADMISSION REQUIREMENTS
In addition to meeting the requirements for admission to a degree program stated in this catalog, applicants for admission in the master’s degree in recreation (M.S.) must meet the requirements outlined below:

1. 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.

2. Each applicant must also submit the following items to the department:
   A. a resume
   B. a brief statement of the applicant’s educational and professional goals
   C. names, addresses and phone numbers of three references

If the applicant lacks substantial academic background in recreation, three to 12 hours of prerequisite coursework 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. in recreation.

A. Recreation: 21 credit hours
   REC 601: Recreation Research and Evaluation I (3 cr. hr.)
   REC 602: Recreation Research and Evaluation II (3 cr. hr.)
   REC 603: Historical, Philosophical, and Theoretical Perspectives of Recreation and Leisure (3 cr. hr.)
   A supervision or administration course (3 cr. hr.)
   Nine credit hours in one of the following concentrations:
      Outdoor and Environmental Education
      Management of Leisure Services
      Therapeutic Recreation.

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 (1 cr. hr.)
   2. REC 684: Thesis (1-6 cr. hr.)
   3. REC 685: Master’s Project (1-6 cr. hr.)

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 coursework from the above requirements, upon advisement.

TOTAL CREDIT HOURS REQUIRED: 33-34

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.
**M.S.Ed. in Recreation Education [RED]**

**ADMISSION REQUIREMENTS**
In addition to meeting the requirements for admission to a degree program stated in this catalog, applicants for admission in the master’s degree in recreation education (M.S.Ed.) must meet the requirements outlined below:

1. 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.

2. Each applicant must also submit the following items to the department:
   - A resume
   - A brief statement of the applicant’s educational and professional goals
   - Names, addresses and phone numbers of three references

If the applicant lacks substantial academic background in recreation, three to 12 hours of prerequisite coursework 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 (3 cr. hr.)
   - REC 602: Recreation Research and Evaluation II (3 cr. hr.)
   - REC 603: Historical, Philosophical, and Theoretical Perspectives of Recreation and Leisure (3 cr. hr.)
   - An education elective, by advisement (3 cr. hr.)
   - A course in curriculum development (3 cr. hr.)

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 (1 credit)
     2. REC 684: Thesis (1-6 credits)
     3. REC 685: Master’s Project (1-6 credits)

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 coursework from the above requirements, upon advisement.

**TOTAL CREDIT HOURS REQUIRED: 33-34**
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.

# 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 consent of instructor. (3 cr. hr.)

**REC 531: Inclusive Outdoor Education**
(B) 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 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 equivalent. (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. Prerequisite: Consent of instructor. (3 cr. hr.)

REC 544: Commercial Recreation Management
(F) 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. Prerequisites: Permission of instructor required to register. (Not open to students with credit for REC 345 or POL 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: Both REC 360 and REC 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. Prerequisite: Consent of instructor for non-majors. (3 cr. hr.)

REC 574: Outdoor Pursuits Education
(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. Prerequisites: REC 379, REC 370, 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. Prerequisite: REC 601. (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: 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 8 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. Prerequisite: Consent of instructor. (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. Prerequisite: Consent of instructor. (3 cr. hr.)
**Science (7-12) — Adolescence Education**

*All New York State graduate teacher education programs are currently under review by the New York State Education Department and are subject to modification pending approval.*

**FACULTY**
Rena Crockett Janke (Coordinator)

**PROGRAMS OFFERED**
- **M.A.T. in Adolescence Education — Science (grades 7-12)**
  - Biology
  - Chemistry
  - Earth Science
  - Physics
- **M.S. Ed. in Adolescence Education — Science (grades 7-12)**
  - Biology
  - Chemistry
  - Earth Science
  - Physics
  - Physics/Mathematics

**Master of Arts in Teaching: Adolescence Education — Science (grades 7-12)**

**[MAT ABI; MAT ACH; MAT AES; OR MAT APH]**

The Master of Arts in Teaching 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 the all-college requirements for admission to graduate study, the applicant for enrollment in the program leading to the Master of Arts in Teaching (M.A.T.) in one of the sciences should present the following:

1. A bachelor of arts or a bachelor of science degree with preparation in science equivalent to one of the undergraduate science majors at SUNY Cortland. (*Must have at least 30 credit hours in the area of specialization and a minimum of 16 hours in other areas of science.*)
2. At least a 2.5 cumulative GPA in undergraduate work.
3. Three letters of recommendation from professors or professional colleagues that address the prospective student’s suitability for teaching science in grades 7-12.
4. Interview with the adolescence education — science (grades 7-12) coordinator.
Master of Science in Education: Adolescence Education — Biology (7-12) [MSED/ABI]

CAREER POTENTIAL
- Teacher: biology (grades 7-12)
- Science department chair

ADMISSION REQUIREMENTS
The applicant for enrollment in the program leading to a Master of Science in Education: Adolescence Education — Biology (7-12) should meet the requirements for admission to a degree program stated in this catalog. In addition, the applicant should present the following:
1. Provisional/initial certification to teach biology in grades 7-12. (Must have at least 30 hours of course work in the subject area of the certificate.)
2. At least a 2.5 overall GPA in all undergraduate courses.
3. Three letters of recommendation from professors and/or professional colleagues and employers that address the prospective student’s success as a classroom teacher or his/her suitability for teaching biology in grades 7-12.
4. Interview with the adolescence education science coordinator.

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 (3 cr. hr.)

OPTION II: (Leads to a middle childhood extension certificate for grades 5-6)
EDU 533: Introduction to Middle Childhood Education (3 cr. hr.)
PSY 533: Advanced Developmental Psychology (3 cr. hr.)

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 of 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 39 of this catalog.
C. Culminating Master’s Project (3 credit hours)
   SCI 690: Independent Study in Science/Mathematics Education
   (3 cr. hr.)

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 39 of this catalog.

Master of Science in Education: Adolescence
Education — Earth Science (7-12) [MSED/AES]

CAREER POTENTIAL
• Teacher: earth science (grades 7-12)
• Science department chair

ADMISSION REQUIREMENTS
The applicant for enrollment in the program leading to a Master of
Science in Education: Adolescence Education — Earth Science
(7-12) should meet the requirements for admission to a degree
program stated in this catalog. In addition, the applicant should
present the following:
1. Provisional/initial certification to teach earth science in grades
   7-12. (Must have at least 30 hours of course work in the subject area
   of the certificate.)
2. At least a 2.5 overall GPA in all undergraduate courses.
3. Three letters of recommendation from professors and/or
   professional colleagues and employers that address the prospective
   student’s success as a classroom teacher or his/her suitability for
teaching earth science in grades 7-12.
4. Interview with the adolescence education science coordinator.

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 (3 cr. hr.)
   Education elective from the areas of social, historical, philosop-
   hical, or psychological foundations of education (3 cr. hr.)

   OPTION II: (Leads to a middle childhood extension of certifi-
   cate for grades 5-6)
   EDU 533: Introduction to Middle Childhood Education
   (3 cr. hr.)
   PSY 533: Advanced Developmental Psychology (3 cr. hr.)
   C. Culminating Master’s Project (3 credit hours)
      SCI 690: Independent Study in Science/Mathematics Education
      (3 cr. hr.)

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 39 of this catalog.

Master of Science in Education: Adolescence
Education — Physics (7-12) [MSED/APH]

CAREER POTENTIAL
• Teacher: physics (grades 7-12)
• Science department chair

ADMISSION REQUIREMENTS
The applicant for enrollment in program leading to a Master of
Science in Education: Adolescence Education — Physics (7-12)
should meet the requirements for admission to a degree program
stated in this catalog. In addition, the applicant should present the
following:
1. Provisional/initial certification to teach physics in grades 7-12.
   (Must have at least 30 hours of course work in the subject area
   of the certificate.)
2. At least a 2.5 overall GPA in all undergraduate courses.
3. Three letters of recommendation from professors and/or
   professional colleagues and employers that address the prospective
   student’s success as a classroom teacher or his/her suitability for
teaching physics in grades 7-12.
4. Interview with the adolescence education science coordinator.

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 (3 cr. hr.)
   Education elective from the areas of social, historical, philosop-
   hical, or psychological foundations of education (3 cr. hr.)

   OPTION II: (Leads to a middle childhood extension of certifi-
   cate for grades 5-6)
   EDU 533: Introduction to Middle Childhood Education
   (3 cr. hr.)
   PSY 533: Advanced Developmental Psychology (3 cr. hr.)
   C. Culminating Master’s Project (3 credit hours)
      SCI 690: Independent Study in Science/Mathematics Education
      (3 cr. hr.)

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 39 of this catalog.

TOTAL CREDIT HOURS REQUIRED: 30
Master of Science in Education: Adolescence Education—Physics and Mathematics (7-12) [MSED_APM]

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

ADMISSION REQUIREMENTS
The applicant for enrollment in the program leading to a Master of Science in Education: Adolescence Education — Physics and Mathematics (7-12) should meet the requirements for admission to a degree program stated in this catalog. In addition, the applicant should present the following:
1. Provisional/initial certification to teach physics and mathematics in grades 7-12. (Must have at least 30 hours of course work in each content area.)
2. At least a 2.5 overall GPA in all undergraduate courses.
3. Three letters of recommendation from professors and/or professional colleagues and employers that address the prospective student’s success as a classroom teacher or his/her suitability for teaching physics and mathematics in grades 7-12.
4. Interview with the adolescence education science coordinator.

PROGRAM REQUIREMENTS
OPTION I (without middle childhood extension)
A. Content (24 credit hours in physics and mathematics)
   1. 12 credit hours in graduate physics
   2. 12 credit hours in graduate mathematics
B. Pedagogy: (3 credit hours)
   Education electives from the areas of social, historical, philosophical or psychological foundations of education. (3 cr. hr.)
C. Culminating—Master’s Project (3 credit hours)
   SCI 690: Independent Study in Science/Mathematics Education (3 cr. hr.)

OPTION II: (Leads to a middle childhood extension of certificate for grades 5-6)
   EDU 533: Introduction to Middle Childhood Education (3 cr. hr.)
   PSY 533: Advanced Developmental Psychology (3 cr. hr.)
C. Culminating Master’s Project (3 credit hours)
   SCI 690: Independent Study in Science/Mathematics Education (3 cr. hr.)

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: 33

NOTE: Specific information regarding additional requirements for qualification for the professional certificate in New York State may be found on page 39 of this catalog.

Sciences

GRADUATE COURSES

BIOLOGY

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 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 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 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 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 431. (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 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 510: Hydrogeology
(F) Examination of the source, distribution, movement and disturbance of surface, vadose zone and groundwater in a geologic and environmental context. Includes aquifer testing, watershed hydrology and some advanced groundwater and water quality modeling. Field trips to well fields, treatment facilities, and a local watershed. Two lectures and one laboratory/field trip session. Prerequisite: GLY 261. (3 cr. hr.)

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 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, features, deposits; Pleistocene chronology and correlations. One two-hour lecture, 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 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 589: 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
(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: CHE 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.) ■
the M.S.Ed. in Adolescence Education–Social Studies program

program stated in this catalog, the applicant for enrollment in
meeting the requirements for admission to a graduate degree
Department and by the program coordinator. In addition to
Applicants are evaluated by either the history or geography
ADMISSION REQUIREMENTS

• preponderance of work in subject matter areas

PHY 570: Nuclear Physics
(S-C) A study of elementary nuclear theory. Topics include the
properties of nuclei, radioactivity, and transmutation. Prerequi-
site: PHY 410. Corequisite PHY 450. (3 cr. hr.) ■

PHY 575: Introduction to Quantum Mechanics
(S) The study of the physical laws underlying microscopic
systems. Topics include the wave-like properties of matter, the
motion of wave packets, Schrödinger’s equation, the solution
of Schrödinger’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.
(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

All New York State graduate teacher education programs are
currently under review by the New York State Education
Department and are subject to modification pending approval.

FACULTY
Sanford Gutman, Coordinator

PROGRAMS OFFERED
M.S.Ed. in Adolescence Social Studies

CONCENTRATIONS OFFERED
History, Geography

DESCRIPTION
The Master of Science in Education in Adolescence Educa-
ton—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
Applicants are evaluated by either the history or geography
Department and by the program coordinator. In addition to
meeting the requirements for admission to a graduate degree
program stated in this catalog, the applicant for enrollment in
the M.S.Ed. in Adolescence Education—Social Studies program
should present the following:
1. Initial certification in adolescence or elementary social studies.
2. A minimum of 18 hours in history or geography and a
minimum of 21 hours combined in history and geography.
3. At least a 2.7 grade-point average (on a 4.0 scale) in the
undergraduate social science major.
4. At least a 2.5 average in all undergraduate courses.

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 coursework in order to be admitted to candidacy for the degree.

Master of Science in Education: Adolescence
Social Studies [MSED/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 comprehen-
sive exam based on work taken in the concentration and in
professional education.

CAREER POTENTIAL
• Secondary social studies teacher
• Professional schools
• Public history (museum, archives)
• Business
• Careers appropriate to geography or political science

PROGRAM REQUIREMENTS
1. Social Science Concentration: 18 credit hours, which must
include: Research and Writing Seminar (HIS 660, 661, 662,
663, 664): 3 credit hours Course on Trends in Discipline (HIS
629, 624, 626, 648, 650 / GRY 640): 3 credit hours Courses
Combining Content and Pedagogy: (HIS 524, 528, 529, 530,
531, 532, 533, 545 / GRY 520, 529, 595): 9 credit hours
Elective in Concentration (500 or 600 level): 3 credit hours

2. Cognate Social Science: six credit hours, which must include:
Course Combining Content and Pedagogy (500 level): three
credit hours Elective Social Science Outside Concentration
(500 or 600 level): 3 credit hours

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.

Old Main, Room 212
(607) 753-2723
E-mail: raffertyb@cortland.edu
www.cortland.edu/history/
Graduate Courses

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 socio-cultural and political systems, governmental processes of new African nations. Prerequisites: Seniors with six hours from AAS 290, 291, 237-238, 395; ANT 304; GRY 536; or graduate student. (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 socio-political opinions and issues into public policy. Examples, comparisons drawn from African, other African American World situations. Prerequisites: Six hours from AAS 292, 396, 397; or graduate. (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.)

Course codes: A = every semester, B = at least once per year, C = at least once every two years, F = fall, M = summer, O = occasionally, S = spring, W = winter, ■ = LAS

TOTAL CREDIT HOURS REQUIRED: 30
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 sem. hrs.)

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.)

THT 529, 629: Special Topics in Theatre
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.)

THT 542: Puppetry For Educators
(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, consent of department. (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 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 593: Readings in Political Science
O Individual readings in selected topics. May be repeated for credit with change of title. 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: PSY 231 or 232 or 332 or 333 or 516. (3 cr. hr.)

PSY 501: Advanced Educational Psychology
B Advanced study of psychological principles, theories related to education. Prerequisite: PSY 231 or 232 or 332 or 333 or 516. (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. Prerequisites: Designated by department as appropriate for content and academic level of credit. (1-4 cr. hr.)

SOC 596: Independent Study in Sociology  
(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.)

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.)

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.)