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2008–2010 GRADUATE CATALOG

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Buffalo State
State University of New York

**2008–2010
Buffalo State College
Graduate Catalog**

Buffalo State College
1300 Elmwood Avenue
Buffalo, NY 14222-1095

www.buffalostate.edu

Buffalo State College is an affirmative action/equal opportunity institution that subscribes to all federal, state, and SUNY legal requirements and does not discriminate against applicants, students, or employees on the basis of race, sex, ethnicity, national origin, sexual orientation, religion, age, disability, or marital or veteran status. Any violation of this policy should be reported to the Equity and Campus Diversity Office, Cleveland Hall 415, (716) 878-6210. It is the policy of Buffalo State College that no otherwise qualified person with a disability shall, solely by reason of the disability, be excluded from participation in employment or access to programs of the college.

This catalog is current as of June 2008. The college reserves the right to cancel any course described in this catalog, and to change any rules governing curriculum, administration, tuition, fees, admissions, regulations affecting students, dates, and course content. Each student is expected to have knowledge of the information contained in this catalog and in other college publications.

This catalog describes all graduate programs of the college. For undergraduate programs, consult the undergraduate catalog.

This publication was funded by an appropriation made available to Buffalo State College. The offices of the vice presidents supplied copy for their respective areas of responsibility.

**This publication is
available in large print
or other accessible
formats upon request.**

CONTENTS

Graduate Programs	2
Dean’s Message, Accreditations	3
Buffalo State College	4
Admission to a Graduate Program	5
Academic Requirements	8
Academic Policies	10
Finances	16
Financial Aid	19
Services and Facilities	23
Graduate Programs at Buffalo State College	28
Academic Program Descriptions and Requirements	30
Course Descriptions	68
Administration	97
Graduate Faculty	98
Campus Maps	102
Index	104
For Your Information	inside back cover

BUFFALO STATE COLLEGE GRADUATE PROGRAMS

Master of Arts

Applied Economics	Page 30
Art Conservation	Page 31
Biology	Page 33
English	Page 49
History	Page 51
History with Museum Studies Concentration	Page 52
Multidisciplinary Studies	Page 56

Master of Science

Adult Education	Page 30
Creative Studies	Page 42
Criminal Justice	Page 43
Industrial Technology	Page 53
Multidisciplinary Studies	Page 56
Student Personnel Administration	Page 65

Master of Professional Studies

Literacy Specialist (Grades 5–12)	Page 53
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Master of Science in Education

Art Education (K–12)	Page 32
Biology Education (7–12)	Page 33
Business and Marketing Education	Page 35
Career and Technical Education	Page 36
Chemistry Education (7–12)	Page 37
Childhood and Early Childhood Curriculum and Instruction	Page 39
Childhood Education (Grades 1–6)	Page 40
Childhood Education (Grades 1–6), including initial certification	Page 41
Early Childhood Education (Birth–Grade 2)	Page 44
Early Childhood Education (Birth–Grade 2), including initial certification	Page 45
Earth Science Education (7–12)	Page 46
Educational Computing	Page 48
English Education (7–12)	Page 49
Literacy Specialist (Birth–Grade 6)	Page 53
Mathematics Education (7–12)	Page 54

Physics Education (7–12)	Page 58
Physics Education (7–12), with alternative certification	Page 58
Social Studies Education (7–12)	Page 59
Special Education: Adolescence	Page 62
Special Education: Childhood	Page 62
Special Education: Early Childhood	Page 62
Speech-Language Pathology	Page 65
Teaching Bilingual Exceptional Individuals	Page 62
Technology Education	Page 67

Certificate of Advanced Study

Art Conservation	Page 31
Educational Leadership	Page 48

Graduate Certificate

Adult Education	Page 30
Creativity and Change Leadership	Page 43
Human Resource Development	Page 52
Museum Studies	Page 57

Postbaccalaureate Teacher Certification

Art Education	Page 32
Biology Education (7–12)	Page 34
Biology Education (7–12; 5–6 extension)	Page 34
Business and Marketing Education	Page 36
Career and Technical Education	Page 37
Chemistry Education (7–12)	Page 38
Chemistry Education (7–12; 5–6 extension)	Page 38
Earth Science Education (7–12)	Page 46
Earth Science Education (7–12; 5–6 extension)	Page 47
English Education (7–12)	Page 50
French Education (7–12)	Page 50
Mathematics Education (7–12)	Page 55
Mathematics Education (7–12; 5–6 extension)	Page 55
Social Studies Education (7–12)	Page 59
Social Studies Education (7–12; 5–6 extension)	Page 60
Spanish Education (7–12)	Page 61
Technology Education	Page 67

DEAN'S MESSAGE

Accreditations

Buffalo State is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104; (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. secretary of education and the Commission on Recognition of Postsecondary Accreditation. Buffalo State also is accredited by the Board of Regents, University of the State of New York. In addition, the following professional organizations have determined that Buffalo State programs meet their accreditation requirements:

Accreditation Association for Ambulatory Health Care (Weigel Health Center)
Accreditation Board for Engineering and Technology (ABET)*
Accreditation Commission for Programs in Hospitality Administration
Accrediting Council on Education in Journalism and Mass Communications (ACEJMC)
American Association of Museums (Burchfield-Penney Art Center)
American Chemical Society
American Dietetic Association**
American Speech-Language-Hearing Association
Council for Interior Design Accreditation (formerly Foundation for Interior Design Education Research—FIDER)
Council on Social Work Education
International Association of Counseling Services (Counseling Center)
National Association of Industrial Technology (NAIT)
National Association of Schools of Art and Design (NASAD)
National Association of Schools of Theatre (NAST)
National Council for Accreditation of Teacher Education (NCATE)***

*Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202, (410) 347-7700.

**The didactic program in dietetics at Buffalo State is currently granted initial accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995, (312) 899-5400.

***The coordinated program in dietetics at Buffalo State is currently granted continuing accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995, (312) 899-5400.

***The professional education programs at Buffalo State are accredited by the National Council for Accreditation of Teacher Education, 2010 Massachusetts Avenue, NW, Suite 500, Washington, DC 20036, (202) 466-7496. The accreditation includes the initial teacher preparation and advanced levels of professional education offered at the college.

Accreditation papers may be reviewed in the Provost's Office, Cleveland Hall 519.



Welcome to the Graduate School at Buffalo State College!

Buffalo State has a proud tradition of offering a wide variety of excellent graduate programs with courses taught by dedicated scholars in the classroom. Graduate faculty are keenly aware of the importance of research, scholarship, and creativity and are engaged in these processes in a variety of ways.

Members of the graduate faculty maintain an ambitious research agenda and are responsible for generating more than \$30 million in research funds and grants. Other faculty members conduct applied research, publish articles and books, and work alongside community partners to effect change in local institutions and communities. This collective record positions Buffalo State as a leader in scholarly research and service in comparison to other master's-granting institutions across the state. Importantly, our faculty members also are committed to assisting graduate students in perfecting skills in their chosen fields of study. Our small classes promote productive faculty-student interactions, and provide ample opportunities for both professional and personal mentoring characteristic of the best graduate programs in the nation.

The Graduate School is located in Cleveland Hall 204 and serves as the hub for information about our graduate programs here at Buffalo State. A talented, caring staff is always welcoming—always ready and willing to assist students with the multitude of questions surrounding graduate programs and policies. Application, admission, program information, graduate assistantships, fellowships, and graduate requirements are examples of the information readily available in the Graduate School office.

Please know that students are encouraged to seek assistance from any of the talented Graduate School staff. They and I look forward to assisting you in whatever ways we can. I am pleased to welcome you to the Buffalo State College Graduate School.

Kevin Railey, Ph.D.
Associate Provost and Dean,
The Graduate School

BUFFALO STATE COLLEGE

When the college opened its doors in 1871 as the Buffalo Normal School, its purpose was to train teachers to serve Buffalo's fast-growing student population in the public schools. Now, Buffalo State educates more than 11,000 undergraduate and graduate students each year. From the beginning, Buffalo State has consistently focused on making quality education accessible to students while addressing the needs of the Western New York community.

The only State University of New York (SUNY) college located in a metropolitan area, Buffalo State offers its students unparalleled educational, cultural, and recreational opportunities, both on the 115-acre campus and throughout the community.

Buffalo State is the largest college in the SUNY system, with 38 master's programs, two certificate of advanced study programs, and four graduate certificate programs, as well as 75 undergraduate degree programs. The college also offers 18 postbaccalaureate teacher certification programs. Page 2 of this catalog lists all postbaccalaureate and graduate program options.

Why a Graduate Degree?

The world we work in has become increasingly complex, and advanced study beyond the baccalaureate degree is now a prerequisite for many career fields, particularly those in education, the sciences, and technology. More than 2,000 students enrolled in graduate study at Buffalo State find that a graduate degree allows them entry into new or related fields or eligibility for promotion in their current fields.

New York State has strengthened its teacher certification requirements. Teachers are now required to enter the classroom with master's degrees achieved through more rigorous teacher-education programs. The new requirements, unequaled in the United States, will ensure that teachers are prepared to help students meet new state Board of Regents high school graduation requirements.

Why a Graduate Degree at Buffalo State?

Buffalo State has been offering graduate degree programs since 1945. Twenty-three areas of specialization in the master's of science in education are offered—more choices in graduate education study than any other SUNY school.

Specialized graduate degree programs include art conservation, creative studies, educational computing, and teaching bilingual exceptional individuals, as well as a master of professional studies degree in literacy (reading

teacher) and a certificate of advanced study in art conservation. Other notable graduate degree programs include adult education, criminal justice, industrial technology, and student personnel administration. Buffalo State also offers graduate degrees in applied economics, biology, English, history, and multidisciplinary studies.

Outstanding opportunities for internships and clinical practice abound. Because Buffalo State is located in New York State's second-largest city, the college can arrange many opportunities for field study or research.

Buffalo State's graduate teacher education programs are distinctive in their ability to provide training in urban, suburban, and rural settings. The training prepares teachers to work effectively in culturally diverse settings, enhance teaching and learning, and reach students with a variety of needs and abilities.

Through assistantships and externally funded research projects, an increased number of graduate students are able to attend full time and participate in research and scholarly activities. Most students complete an applied research project as a culminating activity for the master's degree. For example, all art conservation graduate students are required to complete a nine- to 12-month internship with senior conservators in placements in the United States or overseas, and the speech-language pathology program requires clinical practicum work in both on-campus and off-campus externships.

The campus also offers numerous opportunities for specialized study and research with its Great Lakes Center, the Burchfield-Penney Art Center, the Speech-Language-Hearing Clinic, the Center for China Studies, the Center for Excellence in Urban and Rural Education, and various departmental initiatives.

Through the Career Development Center, students can obtain help seeking employment, and Buffalo State's alumni network provides employment leads.

The State University of New York

The State University of New York (SUNY), a statewide system of 64 campuses, enrolls more than 414,000 students. It is the largest, most diverse multicampus university in the nation. SUNY is committed to bringing its students the best and brightest faculty and the promise of a caring learning environment. State support keeps SUNY tuition much lower than rates charged at private colleges and universities.

ADMISSION TO A GRADUATE PROGRAM

Buffalo State's graduate programs nurture student creativity, scholarship, and professional development. The college welcomes qualified applicants seeking intellectual enrichment and professional advancement through advanced study in its master of arts, master of professional studies, master of science, master of science in education, certificate of advanced study, graduate certificate, and postbaccalaureate teacher certification programs.

Admission is granted jointly by the Graduate School and the academic department in which the student plans to pursue graduate studies. Individual departments may establish separate standards by which they judge admission. Specific program requirements are listed in the program descriptions in this catalog.

All admission applications and supplemental forms can be obtained online at www.buffalostate.edu/graduateschool or through the Graduate School in Cleveland Hall 204, (716) 878-5601, gradoffc@buffalostate.edu.

Admission Classifications

Degree (Matriculated) Student — a student who has been accepted for matriculation in a master's degree, graduate certificate or certificate of advanced study. An adviser appointed by the department chair develops the student's program of study in consultation with the student. A student is not officially working toward a specific degree until he or she is admitted to degree candidacy (see page 8).

Premajor (Nonmatriculated) Student — a student who has been accepted to premajor status instead of the matriculated major due to a deficiency in admission credentials as determined by the academic department. A maximum of 6 credit hours may be applied toward degree requirements upon approval of the major department. Admission in this status does not imply or guarantee admission to a master's degree or certificate of advanced study program. Students accepted in this status may register for coursework with open seating only. Premajor students must apply to the matriculated major using a change of major application once all admission deficiencies have been removed.

Postbaccalaureate Teacher Certification Program (Nonmatriculated) Student — a student who has earned a baccalaureate degree in a teaching-related content area (or equivalent coursework) from an accredited college or university and intends to complete required coursework for New York State teaching certification eligibility.

Some teacher certification programs may include only undergraduate courses, while others may require coursework at both the undergraduate

and graduate levels. If graduate coursework is completed during the certification program and with the approval of the department, these credit hours may be applied toward a master's degree program.

After successfully completing the teacher certification program, students are eligible to apply online for New York State certification at www.highered.nysed.gov/tcert/teach. Contact the Teacher Certification Office, Caudell Hall 101, with questions. No degree or certification is awarded by Buffalo State.

Admission in this status does not imply or guarantee admission to a master's degree program. Students must apply for admission to the appropriate master's program; admission is not automatic upon completion of the teacher certification program.

Nondegree (Nonmatriculated) Student — a student who has obtained a bachelor's degree and who wishes to enroll in graduate coursework for reasons other than completing a master's degree, graduate certificate, or certificate of advanced study. A student who has missed the application deadline for matriculation in a master's or certificate program may also apply for nondegree status. Students denied admission to a degree program may apply for nondegree status.

All students are advised that a maximum of 6 credit hours taken as a nondegree student may be applied toward degree requirements upon approval of the major department.

Not all programs/departments permit nondegree students to take coursework intended for their graduate degree students. Preference will be given to students matriculated in degree programs. Therefore, registration for all nondegree students is on a space-available basis only.

Acceptance in this status does not imply or guarantee admission to a graduate degree program. Coursework may not be applicable to a degree program; department approval is required.

Undergraduates Enrolling in Graduate Courses

Second-semester seniors (students who have completed more than 106 credits by end of previous semester) at Buffalo State may register for graduate-level courses if they have maintained a minimum cumulative GPA of 2.5. A maximum of 6 graduate credit hours may be taken as a senior. The combined enrollment of undergraduate and graduate courses should not exceed 15 hours per semester.

Courses taken in this manner are related to a graduate program of study and will not apply toward an undergraduate degree. These courses may be

applied toward an advanced degree if they are acceptable to the department. The six-year time limitation on the completion of the master's degree program applies to these as well as other credits.

An Override Request Form—Undergraduate Request to Enroll in Graduate Course must be signed by the instructor and department chair. This form is available from the appropriate academic department.

Admission Requirements

For admission to matriculated graduate study, a student must:

1. Hold an approved baccalaureate degree from an institution that is accredited by an approved regional accrediting agency. International students must hold a baccalaureate degree that is equivalent to a four-year baccalaureate degree in the United States, from an institution that is accredited by an approved regional or national accrediting agency.
2. Have a minimum cumulative GPA of 2.5 (4.0 scale) in the baccalaureate program or a 3.0 in previous graduate coursework. If the applicant has attended an institution using the quarter system, credit hours will be converted to semester hours using the following equation:

1 quarter hour = $\frac{2}{3}$ (.66) semester hour

2 quarter hours = $1\frac{1}{3}$ (1.33) semester hours

3 quarter hours = 2 semester hours

Some departments may establish higher standards for admission or require applicants to submit additional materials, such as a department application, letter of intent, letters of recommendation, teaching certificate, or recent test scores. Refer to the Academic Programs section of this catalog or contact academic departments to determine any additional requirements for admission.

For information on the Graduate Record Exam (GRE), visit www.gre.org; for information on the Miller Analogies Test (MAT), visit www.milleranalogies.com. Buffalo State will accept scores from tests taken in the past five years; older scores are not acceptable.

How to Apply

Buffalo State maintains a student-managed admissions process that requires an applicant to submit a complete application with all required components to the Graduate School by the appropriate deadline. Thus, applicants are assured the admissions committee has all the necessary information to evaluate their qualifications. Incomplete applications will be returned to students, resulting in a delay in application processing. Submitted materials are the property of the Graduate School. Copies of application materials will not be supplied to the student or any other institution.

Degree Applicants and Postbaccalaureate Teacher Certification

Applicants — Complete the Graduate Admission Application and submit a complete application packet according to the directions below.

Nondegree Applicants — Complete the Nondegree Student Application and submit it with the application fee and, in a sealed envelope, official transcripts from the institution granting your highest degree earned to the Graduate School, Cleveland Hall 204.

Admissions applications, application fee payment forms, transcript request forms, and supplemental department materials are available at www.buffalostate.edu/graduateschool/admissions; The Graduate School, Cleveland Hall 204; or e-mail gradoffc@buffalostate.edu.

Application Deadlines

Application deadlines vary by department. Some programs have specific deadlines, as indicated in their supplemental application materials or

program description. Others review applications on a continual basis. A significant amount of time is required by the Graduate School and the academic department to process an application and make an admissions decision. Generally, applications must be received at least one week prior to the beginning of classes for programs with rolling admissions. Further information on this deadline can be obtained from the Graduate School, Cleveland Hall 204, www.buffalostate.edu/graduateschool, (716) 878-5601.

Completed Application Packet

A completed application packet includes:

1. Completed Graduate Admission Application.
2. Completed Application Fee Payment Form and a \$50 nonrefundable application fee. Acceptable methods of payment: Visa, MasterCard, or check or money order made payable to Buffalo State College.
3. Any supplemental application materials, such as department application, letter of intent, letters of recommendation, copy of teaching certificate, or recent exam scores as stated in the program description. It is the applicant's responsibility to review the individual program admissions requirements before applying to determine if supplemental materials are required. Individual program descriptions may be found in the Academic Programs section of this catalog, beginning on page 30. Supplemental materials are available for download at www.buffalostate.edu/graduateschool/admissions. Incomplete applications will be returned to the applicant. International applicants: see next section for instructions.
4. Official transcripts from all colleges and universities attended must be in sealed envelopes. Each institution must send the transcript directly to the student. Students submit unopened transcript envelopes with other application materials. Buffalo State graduates are not required to submit transcripts, as the Graduate School will obtain them. In some cases, transfer credits into an institution conferring a degree are acceptable. Official transcripts from the institution(s) not granting the degree are not required.

Note: Failure to report all previous college attendance on the application is considered to be academic dishonesty. Discovery of such dishonesty will result in no transfer of credit and can result in suspension from Buffalo State College.

International Applicants

A completed international application packet includes:

1. Completed Graduate Admission Application.
2. Completed Application Fee Payment Form and a \$50 nonrefundable application fee. Acceptable methods of payment: Visa, MasterCard, or check or money order made payable to Buffalo State College.
3. Any supplemental application materials as stated in the program admissions requirements, such as department application, letter of intent, letters of recommendation, copy of teaching certificate, or recent exam scores. It is the applicant's responsibility to review the individual program admissions requirements before applying to determine if supplemental materials are required. Individual program descriptions may be found in the Academic Programs section of this catalog, beginning on page 30. Supplemental materials are available for download at www.buffalostate.edu/graduateschool/admissions. Incomplete applications will be returned to the applicant.
4. Official or certified true copies of transcripts along with a certified English translation of all transcripts from postsecondary schools outside the United States.
5. A degree evaluation is required for all students who have completed a bachelor's degree outside the U.S. Applicants must submit official copies of postsecondary diplomas/transcripts to one of the following organizations for a document-by-document evaluation* to determine equivalency to a U.S. bachelor's degree:

Josef Silny and Associates, International Education Consultants, P.O. Box 248233, Coral Gables, FL 33124, Phone: (305) 273-1616, Fax: (305) 273-1338, www.jsilny.com.

World Education Services Inc., P.O. Box 745, Old Chelsea Station, New York, NY 10113-0745, Phone: 1-800-937-3895, Fax: (212) 739-6100, www.wes.org.

Students should contact the organization or visit its Web site for the most current requirements and to request or download an application. Completed applications listing the Buffalo State College Graduate School as the recipient should be returned to the organization with the required fees and credentials. The organization will forward its evaluation report to Buffalo State. This evaluation can take up to four weeks to complete after all documents are received. Check with the organizations for specific fee structure(s).

6. Applicants for whom English is a second language must submit a score on the Test of English as a Foreign Language (TOEFL) as documentation of English language proficiency. Only applicants with minimum TOEFL scores of 550 on the paper exam or 79 on the Internet exam are considered for admission. Information on the TOEFL can be found at www.toefl.org.

Canadian Applicants: Students holding undergraduate degrees from a Canadian college or university should submit official transcripts to the Graduate School. If transcripts follow a system similar to that of the United States, they will be evaluated locally. If not, Canadian applicants will be required to comply with the above international student credential policy.

*Academic departments may subsequently request that students obtain a course-by-course evaluation as well.

Other International Student Enrollment Information

Contact the International Student Affairs Office for more information about services for international students: Campbell Student Union 400, www.buffalostate.edu/internationalstudentaffairs, or (716) 878-5331.

Student Visas: International students must show proof of financial support for the duration of studies on the Confidential Statement of Finances form. About \$21,500 a year should be budgeted to cover expenses. By the time they arrive on campus, international students should have arranged for the funds to cover their college career. Payment of all college-related expenses must be made prior to the beginning of each semester.

Once an applicant has been officially accepted to a degree program, the Graduate School will mail an acceptance letter and the paperwork necessary to apply for an I-20 form. The applicant must return these forms to the International Student Affairs Office, which will send an I-20 form to the student to obtain an F-1 (student) visa from the U.S. embassy or consulate in their home country.

Mandatory Student Health Insurance: All international students must enroll in a group health insurance plan mandated by the State University of New York. Visit the Weigel Health Center at www.buffalostate.edu/weigel or call (716) 878-6711 for current international student health insurance costs.

Housing: International students may live on or off campus. On campus, they may live in the international residence hall, which remains open during U.S. holidays, or in any other residence hall, provided they move out of the hall during the holidays. Visit the Residence Life Office at www.buffalostate.edu/residencelife or call (716) 878-6808 for more information.

Incomplete Transcripts

Conditional admission may be granted to applicants whose baccalaureate degree or master's degree has not yet been conferred, or if grades for the current term have not yet closed at the time of application. Applicants must have a final official transcript showing the awarding of the degree sent to the Graduate School as soon as the degree is conferred. The Graduate School will obtain final transcripts for Buffalo State graduates. Failure to meet this requirement will result in rescission of acceptance to the college and cancellation of course enrollment.

Readmission to Graduate Study

Discontinuance Registration Procedure

Students who do not register for and complete one graduate course within four academic semesters (fall/spring) must apply for readmission to graduate study in accordance with established deadline dates and current admission requirements. Those seeking readmission should:

1. Complete general graduate admissions application.
2. Resubmit all undergraduate transcripts (except Buffalo State) as well as all supplemental application materials as listed in current program admission guidelines.
3. If degree candidacy was awarded during previous study, the student will have to complete a new degree candidacy application upon readmission. Failure to resubmit degree candidacy will restrict further registration.
4. Submit the application and other materials as one packet to the Graduate School, Cleveland Hall 204, by stated deadlines.

Academic Clemency Procedure

Conditions for academic clemency:

1. The graduate student will have the option to request clemency for up to two consecutive semesters of previous work (9 to 12 consecutive credit hours if earned on a part-time basis). A decision for clemency will include all coursework taken within the one or two semesters indicated at Buffalo State College and shall not be selectively applied. Therefore, the student forfeits all prior coursework up to the 12 credit hour maximum and any remaining credit hours at the time of clemency must result in a 3.0 GPA or greater.
 2. Clemency cannot be used by students who have already earned a degree for any work completed prior to the award of that degree.
 3. Credits for which the student has requested academic clemency will remain on the student's transcript but will not be calculated into the overall cumulative average and will not count toward graduation. The student's transcript will contain a notation of academic clemency.
 4. The student will be required to sign a statement indicating his/her understanding of the conditions stated in the academic clemency policy and will file a formal petition with the Graduate School. Such a statement will indicate that computation of the grade point average for admissibility to other graduate programs could include all college work completed.
 5. Students approved for academic clemency will be required to meet with their academic adviser in order to determine the appropriate selection of courses.
 6. Students will be advised that the decision to file for academic clemency may affect qualification for financial aid.
 7. The decision to exercise the academic clemency provision is final and irreversible.
- The dean of the Graduate School will be responsible for overseeing the implementation of this policy.

Change of Major

Students wishing to transfer from one degree curriculum to another must apply to the new degree program in accordance with established deadline dates and current admission requirements. Those seeking to change majors should:

1. Complete a Change of Major Application (available online at www.buffalostate.edu/graduateschool/forms).
2. Submit any departmental supplemental application materials (available online at www.buffalostate.edu/graduateschool/admissions).
3. Submit the application and supplemental materials as one packet to the Graduate School, Cleveland Hall 204, by stated deadlines.

ACADEMIC REQUIREMENTS

Candidacy

Candidacy is a written agreement outlining the courses necessary to receive a degree or certificate. All students pursuing a master's degree, graduate certificate, or a certificate of advanced study must apply for and be admitted to candidacy after the completion of 6, but before the completion of 12 graduate-level credit hours at Buffalo State. A degree candidacy application must be approved by the adviser, department chair, and school dean. (Degree candidacy applications for multidisciplinary studies students must be approved by the principal adviser, advisory committee and graduate school dean.) Failure to develop an approved program and be admitted to candidacy before the completion of 12 graduate-level credit hours at the college could restrict further registration.

Application forms for degree candidacy are available from the academic department and on the Graduate School Web site www.buffalostate.edu/graduateschool/forms. The current requirements for admission to candidacy are:

1. Completion of at least 6 credit hours of graduate-level coursework at Buffalo State.
2. Completion of all required prerequisite courses.
3. A minimum cumulative GPA of 3.0 (B grade) in all graduate-level coursework. No grade lower than C is acceptable to meet degree requirements.
4. Removal of all deficiencies and incomplete (I) grades.
5. If requesting transfer credit, the Graduate School must receive an official transcript from the regionally or nationally accredited institution where the graduate-level coursework was completed. Only grades of B or better will be accepted for transfer credit. See policy under Transfer Credit, page 9.
6. A minimum of 15 credit hours of coursework at the 600- or 700-level is required in all degree programs.
7. A maximum of 6 credit hours of independent study (XXX 590) may be included in a degree program.
8. Coursework taken to fulfill degree requirements for one master's degree or certificate of advanced study may not be applied toward another master's degree, graduate certificate, or certificate of advanced study.
9. A maximum of 6 credit hours of workshops, conferences and micro (XXX 594, 596, 598) courses may be included in a degree program.

Graduate candidacy forms require several approval signatures for the purpose of ensuring the accuracy of the proposed program and compliance with academic policy. Graduate candidacy is not approved until ALL signatures have been obtained. The graduate candidacy includes a section titled Completion Date. These are anticipated completion dates. Due to course

prerequisites, course availability, etc., it may not be possible to complete coursework in the term listed on the candidacy. Students should periodically check with advisers to review the anticipated completion dates.

Changes to Approved Degree Candidacy

Once the candidacy form has been approved, changes can be made only with approval of the student's adviser, department chair, and school dean. Change forms are available in department offices or online at www.buffalostate.edu/graduateschool/forms.

Continuous Enrollment Policy

Students must register for and complete at least one graduate course within four academic semesters (fall/spring) or they will be dropped from the program and must apply for readmission. Reapplication must be made in accordance with the established deadline dates and current admission requirements. See Readmission, page 7.

Graduation/Commencement

In order for a graduate student to be awarded a master's degree or certificate of advanced study, the following minimum requirements must be met:

1. Completion of the Application for Graduation, submitted to the Graduate School, Cleveland Hall 204, by the specified deadline as listed in the Academic Calendar, online at www.buffalostate.edu/academics/ (click on Academic Calendar). Failure to apply by the deadline date may delay the granting of the degree and may result in the omission of the student's name from the commencement program.
2. Completion of a minimum of 30 graduate-level credit hours.
3. A minimum cumulative GPA of 3.0 (B) in all graduate coursework.
4. Completion of all coursework and degree requirements within the six-year period immediately preceding the date of graduation.
5. Completion of a minimum of 15 credit hours of 600- or 700-level coursework.
6. Receipt by the Graduate School of official transcript(s) of approved transfer credit as listed on the candidacy form. Transfer credit must meet all requirements as defined under Transfer Credit on page 9 of this catalog.
7. All graduate and undergraduate courses with a grade status of I, N, or X must be completed and appropriate grades submitted.

8. All financial obligations to the college must be met, and all college property must be returned.

9. Students who write a master's thesis must submit an official copy to the Graduate School office before a diploma will be issued.

Students who do not meet the requirements for graduation by the semester for which they applied must submit a new application for graduation, in accordance with established deadlines, for the semester in which the requirements will be completed.

Commencement

Commencement is held once each year at the end of the spring semester in May. Students eligible to participate in commencement are those who complete their degree requirements in December (previous), May (current), or August (anticipated). Visit the commencement Web site for more information: www.buffalostate.edu/commencement.

Initial/Permanent/Professional Certification in Education

Buffalo State's graduate-degree programs in education are registered with the New York State Department of Education. All graduates who meet state certification requirements are recommended by the college for the appropriate certification. Students eligible for initial/permanent/professional certification can apply online at www.highered.nysed.gov/tcert/teach. Contact the Teacher Certification Office, Caudell Hall 101, (716) 878-6121, with questions.

Project, Thesis, and Comprehensive Examinations

Degree programs require a project, thesis, or comprehensive examination as evidence of mastery of the chosen field. Individual program descriptions in this catalog contain specific degree requirements. Contact hours stipulated for projects and theses will vary, depending on the nature of the work and departmental requirements.

Time Limit for Degree Completion

All coursework and degree requirements must be completed within the six-year period immediately preceding a student's graduation. Coursework completed more than six years prior to date of graduation cannot be used to satisfy degree requirements unless approved by the advisor, department chair and school dean.

Transfer Credit

There is no automatic transfer of credit toward a graduate degree or certificate of advanced study. A maximum of 12 graduate-level credit hours of transfer work from an approved regionally or nationally accredited institution may be applied to a degree program or certificate of advanced study upon departmental/adviser approval. Academic departments reserve the right to allow fewer transfer credits. The applicability of transfer credit to a graduate certificate program is determined by the department. The 12-credit maximum does not apply to the master's degree program in multidisciplinary studies, which allows a maximum of 15 credit hours of transfer work upon advisory committee approval.

Specific restrictions:

1. Transfer work must be a coherent part of the required program of study and be approved by the major department.

2. Transfer work must be completed within the six-year period immediately preceding the date of graduation.

3. Only grades of B or better are acceptable for transfer. Grades of S or P are not acceptable.

4. Coursework taken to fulfill degree requirements for one master's degree or certificate of advanced study may not be applied toward another master's degree, graduate certificate, or certificate of advanced study.

5. Official transcripts must be submitted to the Graduate School in a sealed envelope from the institution at which the coursework being requested for transfer was completed. The institution must be accredited by an approved regional or national accrediting agency.

6. Transfer credit requested from institutions using the quarter system will be converted to semester hours using the following equation:

1 quarter hour = $\frac{2}{3}$ (.66) semester hour

2 quarter hours = $1\frac{1}{3}$ (1.33) semester hours

3 quarter hours = 2 semester hours

Transfer credit requests should be presented for consideration at the time the student applies for degree candidacy (see Candidacy section, page 8) or as soon as the coursework is completed. Approved transfer credit is added to the student's official record when the student's approved degree candidacy application and official transcripts of transfer credit are received by the Graduate School.

ACADEMIC POLICIES

Graduate students must assume full responsibility for knowledge of rules and regulations of the college and department requirements concerning their individual degree programs. Requirements and programs are subject to change, and students must be aware of current regulations.

Academic Misconduct

All students are expected to display honesty and integrity in completing course requirements and complying with college academic regulations. Academic misconduct refers to plagiarism or cheating on examinations or assignments and is inconsistent with the aims and goals of Buffalo State. Specifically, students may neither use the work of another individual without proper acknowledgment nor perform work for another individual. Other examples of inappropriate academic conduct include prior acquisition or possession of an examination or submission of false data. As a result of a sustained allegation of academic misconduct, a low or failing grade for part or all of the coursework may be given to the student at the discretion of the instructor. No penalty for an alleged instance of academic misconduct may be imposed unless the student has been apprised of the allegation, the penalty, and the procedures of due process that are available.

A statement outlining formal college policies and procedures to be followed in cases of alleged academic misconduct is on file in each dean's office, the Academic Standards Office, and the Student Life Office.

Cases of severe infractions of acceptable standards may be brought before the Academic Misconduct Board, chaired by the director of Academic Standards, and may result in academic dismissal.

Academic Probation and Dismissal

All graduate students are required to maintain a minimum cumulative GPA of 3.0 (4.0 scale). A student is automatically placed on probation if the GPA falls below 3.0.

Matriculated full-time students are given one semester, and matriculated part-time students are given 9 credit hours to achieve a 3.0 GPA, provided total credit hours do not exceed the degree program by more than 6. Failure to achieve a 3.0 GPA within the specified time results in academic dismissal. In addition, failure to maintain a minimum 3.0 GPA during each semester of academic probation results in academic dismissal.

Premajor (undeclared) students must have a 3.0 GPA by the completion of 12 or more credit hours. Failure to achieve a 3.0 GPA by the completion of 12

or more credit hours of graduate-level coursework results in academic dismissal. A student with fewer than 12 credit hours automatically is placed on academic probation should the GPA fall below 3.0. Failure to achieve a 3.0 GPA by the completion of 12 credit hours results in academic dismissal. In addition, failure to maintain a minimum 3.0 GPA during each semester of academic probation results in academic dismissal.

Nondegree students have until the completion of the next semester in which enrolled to bring his or her GPA to 3.0 after being placed on academic probation. Failure to do so renders the student ineligible for further registration.

A student who has been academically dismissed must wait one full year from the time of dismissal before applying for readmission.

A student may be readmitted to the college only once after an academic dismissal. If readmitted, the student is automatically returned to academic probation if his or her cumulative GPA is below 3.0. The student then has one full-time semester or 9 credits of part-time study to achieve a 3.0 cumulative GPA, and must maintain a minimum of 3.0 GPA during each semester of academic probation. Failure to do so results in final academic dismissal.

Alternative Methods of Earning Credit

Course by Contract

Students who have been accepted to a graduate degree program and are in good standing may request to take a course by contract by contacting the department offering the course. The instructor must be a member of the college's graduate faculty, and the course must be among those already approved by the college.

Under this option, a graduate faculty member provides the student with a course outline, bibliography, and a statement of responsibilities and dates by which these are to be met. The number of student-instructor conferences, the type of evaluation, and the culminating activity is determined by the faculty member and the student prior to registration for the course. These requirements must be filed with the department chair. Before initiating a graduate course by contract, the student must register for the course using the Individual Graduate Study Application form, obtained from the department office, the Graduate School, or www.buffalostate.edu/graduateschool/forms. This form must be signed by the instructor, the department chair, and the school dean by the Individual Study Application deadline. Consult the academic calendar online at www.buffalostate.edu/academics (click on Academic Calendar).

Cross Registration

Graduate coursework may be taken at any public or private college in Western New York with which Buffalo State College has a cross-registration agreement. Courses are taken on a space-available basis during the fall and spring semesters only. Students must be registered for at least one course at Buffalo State in order to cross register at another institution. International students must be registered for 9 credit hours at Buffalo State to participate.

Cross-registration forms are available in the Registrar's Office. They must be signed by the student's adviser and returned to the Registrar's Office for signature. Students then take signed forms to the campus where the course will be taken, where they follow the registration procedures of that campus.

Transcripts are forwarded automatically to Buffalo State at the end of the semester. Courses taken through cross registration are recorded as if they had been taken at Buffalo State; the credit hours and grades are included in the student's cumulative GPA.

Independent Study (XXX 590)

Independent study provides an opportunity for a student to pursue a topic that may be covered only briefly or not at all in a regular course offering. Independent study is never a substitute for a regular course.

Independent study may be offered by any member of the college's graduate faculty. All independent study is listed by the appropriate content area prefix and the number 590 (e.g., EDF 590). A maximum of 6 credit hours of independent study may be included in a master's degree program.

Students must register for graduate-level independent study by completing the Individual Graduate Study Application, available from academic departments, the Graduate School, or www.buffalostate.edu/graduateschool/forms. The application must include a written paragraph describing the proposed course, including the purpose, objectives, method of instruction (e.g., readings, individual consultations with instructor, etc.), and method of evaluation (e.g., research paper, examination, etc.). The application must be signed by the instructor, the department chair, and the school dean by the Individual Study Application deadline. Consult the Academic Calendar for appropriate deadlines, online at www.buffalostate.edu/academics (click on Academic Calendar).

Workshops (XXX 594), Conferences (XXX 596), and Microcourses (XXX 598)

Workshops, conferences, and microcourses are graduate courses offered— at variable times and places—on particular themes outside the usual schedule of classes. These courses also carry variable credit. A maximum of 6 credit hours of workshops, conferences, and micro-courses may be included in a master's degree program. Workshops emphasize process and implementation of theory, and they involve participants in the accomplishment of individualized objectives on a specific theme. Conferences emphasize a unique, one-time experience on a given theme. Microcourses offer intensive instruction with a specific, limited objective.

Auditing Courses

Graduate students who are registered for one or more courses may audit courses, provided they have the approval of the department chair and the course instructor. An auditor attends a course without formal recognition, is not on the official class list from the Registrar's Office, is not required to meet the course requirements, is not charged tuition or fees for the course, and does not earn credit for the course.

Special audit: Individuals age 60 or older may audit courses on a space-available basis with the approval of the instructor. Arrangements can be made through the Admissions Office, Moot Hall 110, (716) 878-5511.

Course Load

1. The full-time student course load is 12 credit hours per semester.
2. During summer session, students may earn a maximum of 19 credit hours.
3. The average maximum load for graduate assistants is 9 credit hours per semester, but varies according to assignment. Responsibility for approving specific maximum course load rests with the student, the adviser, and the staff member controlling the service assignment or college appointment.
4. Financial aid eligibility is affected by a student's course load. Contact the Financial Aid Office to determine eligibility: (716) 878-4902 or www.buffalostate.edu/financialaid.

Grade Point Average (GPA)

To earn a graduate degree or certificate, a student must maintain a minimum cumulative GPA of 3.0 (B) on a 4.0 scale in all graduate courses completed at the college. Transfer credits are not included in the average. Undergraduate coursework completed while working toward the graduate degree is not included in the average but is shown on the transcript. Grades received for coursework completed at another institution through cross registration are included in the average.

At the graduate level, grades of C or higher may be applied toward credit requirements for a master's degree. Typically, no more than 9 credit hours with a grade of C can be accepted toward a master's degree, and some degree programs permit even fewer than 9 credit hours of C work. Grades of C– or lower are not used to satisfy degree requirements. Grades of C– or lower may be repeated (see Repeating Courses, page 12).

Grading

The college uses letter grades (including plus/minus) to indicate the scholarly achievement of a student at the completion of a course. All grades are awarded at the sole discretion of the faculty member in charge of the course. A grade must be submitted for each student on the course roster at the end of the semester. Students are apprised of class evaluation policies in each class at the beginning of the semester. Questions regarding grading policies or a grade received in a particular course should be addressed to the instructor or the instructor's department chair.

Grading System

- A = Superior
- A– = Above Average
- B+ = Above Average
- B = Average (required minimum cumulative GPA)
- B– = Below required average, but may be used to meet degree requirements
- C+ = Below required average, but may be used to meet degree requirements
- C = Below required average, but may be used to meet degree requirements
- C– = Below required average; may not be used to meet degree requirements
- D+ = Below average; may not be used to meet degree requirements
- D = Below average; may not be used to meet degree requirements
- E = Failure or unofficial withdrawal
- S = Satisfactory
- U = Unsatisfactory
- P = Pass; may not be given for graduate coursework
- F = Fail; may not be given for graduate coursework

The following letters are used to indicate status:

- I = Incomplete
- N = Grade delayed
- X = Grade not submitted
- W = Withdrawn

Explanation of Grades

S (Satisfactory) and U (Unsatisfactory) grades are reserved for student teaching or other field experience that is not suitably evaluated using standard letter grades. S and U grades may be given only for courses so designated.

Incomplete (I) Grades: An instructor may submit a grade of I (Incomplete) only when circumstances leading to a student's failure to complete course requirements are known to be beyond the student's control (e.g., serious illness or unavailability of material) and only when the department chair or program coordinator has been properly notified. The student must complete course requirements and the instructor must submit a grade change by the 10th week of the following spring or fall semester or the grade automatically converts to an E (Failure). In the event that the instructor who granted the I grade is unable to evaluate whether the student has fulfilled the course requirements during the stipulated time period, the chair or program coordinator takes responsibility for evaluating the student's work and changing the grade.

A grade of N (Grade Delayed) may be submitted in the case of a thesis/project, research work, or internship that carries forward from one semester to another (e.g., a two-semester project). This letter indicates that the student has devoted an adequate amount of time to the work scheduled, but gives no indication as to the quality of work. When the work is completed, the instructor submits a grade change, replacing the N with a final grade.

A grade of W (Withdrawn) may be submitted only when a student has officially withdrawn from a course.

Quality Point System

The grade point system is used to determine all cumulative GPAs. A student receives four grade points for each A earned; three points for each B; two points for each C; one point for each D; and zero points for each E. Instructors may choose to assign plus or minus grades as well. No other letter grades carry grade-point value. The possible grades and corresponding grade points are as follows:

A	=	4.0	C	=	2.0
A-	=	3.67	C-	=	1.67
B+	=	3.33	D+	=	1.33
B	=	3.0	D	=	1.0
B-	=	2.67	E	=	0.0
C+	=	2.33			

A student's cumulative GPA is computed by dividing the total number of grade points awarded by the total number of semester hours attempted in which a grade carrying grade points is earned.

Change of Grade

Grades submitted at the end of the semester are considered final. In the case of a clerical error or other extenuating circumstance resulting in an incorrect grade, the instructor must submit a written justification to the appropriate associate dean requesting a grade change. The appropriate associate dean must approve all grade changes and forward the grade change form to the Registrar's Office.

Repeating Courses

A student may repeat a given course once for which a C-, D+, D, or E grade was earned. The repeated course must have the same prefix, number, title, and credit. The repeated course must be taken at Buffalo State. Only the passing grade and those credit hours completed will be used to calculate the GPA. Graduate students may repeat a maximum of two courses of the total degree program.

All grades remain on the permanent record. A passing grade will not replace a U grade, since the U is not computed in the GPA. Courses with letter grades A through C cannot be repeated. Illegally repeated courses are not used to calculate the cumulative GPA.

Practicum courses may differ. Contact the academic department.

Repeating courses affects financial aid. Contact the Financial Aid Office for the current policy.

Once a student has completed a master's degree or certificate of advanced study, a final average for that degree or certificate is computed. Courses for that degree or certificate may not be repeated, and that final average is not affected by any subsequent coursework completed at Buffalo State.

Registration

Students are expected to complete registration within two weeks after they become eligible to register and to attend the first meeting of all classes in which they have enrolled.

Immunization Requirement

All students matriculated in a degree program born on or after January 1, 1957, are required to submit proof of immunization against measles, mumps, and rubella. All students (matriculated or nondegree) must submit a completed Meningitis Information Response Form indicating immunization or decision not to obtain immunization. Students who do not submit proof of immunizations are not permitted to register. Contact the Weigel Health Center to submit proof of immunizations or for more information at (716) 878-6711 or www.buffalostate.edu/weigel.

Advisement

The department chair designates a member of the graduate faculty to serve as an adviser to the student and to assist in planning the course of study. It is the student's responsibility to seek a conference with the adviser before registration, application to degree candidacy, and application for graduation.

Change of Name, Address

Students are responsible for notifying the Graduate School of any change of name or address so that registration information and other mailings can be properly directed. Download data change form from www.buffalostate.edu/registrar/forms.xml and submit it along with name change proof by fax to (716) 878-5630 or by mail to: The Graduate School, Cleveland Hall 204.

Dropping Courses

Students may drop courses online through the first week of a fall or spring semester or the first two days of a summer session without financial penalty. Officially dropping a course removes all record of the course from the student's transcript, and no financial penalty is assessed.

Withdrawal from Courses

Students who wish to discontinue a course after the drop/add period but before the final withdrawal date (the end of the 10th week of the semester or the equivalent point in a summer session; see Academic Calendar) must complete and submit an official withdrawal form to the Registrar's Office, Moot Hall 210.

Withdrawal forms are available at most academic department offices or at the Registrar's Office. A course from which a student has officially withdrawn remains on the transcript, recorded as W. Instructors are required to apprise students of their academic standing no later than the end of the ninth week of the semester (or the equivalent point in a summer session; see Academic Calendar). If a student stops attending but does not officially withdraw from a class, a grade of E (Failure or unofficial withdrawal) is recorded.

An exception may be made for unusual circumstances beyond the student's control. In such cases, procedures for Waiver of Academic Regulations apply. Withdrawal from a course may affect eligibility for financial aid in current and future semesters. For additional information about financial aid eligibility, refer to the Financial Aid section of this catalog (page 19) or www.buffalostate.edu/financialaid

Students withdrawing from coursework may be eligible for a tuition refund in accordance with the schedule published on page 18 of this catalog. No refunds are issued beyond the end of the refund period.

A student who does not register for any course or withdraws from all courses during his or her first semester should inform the Graduate School.

Transcripts

Official transcripts are not issued directly to students but are forwarded, upon request, to authorities whom the student designates. Student copies may be ordered for personal use. A \$5 fee is charged for each transcript request. Photo identification is required when picking up student copies. Transcript request forms are available in the Registrar's Office, Moot Hall 210, or download from www.buffalostate.edu/registrar/transcripts.xml.

Transcripts will not be furnished for students who have incurred a financial obligation to the college.

Transcript requests sent by mail must include the student's name, current address, social security number, dates of attendance, graduation date (if applicable), name and address of the party to whom the transcript is to be sent, the student's signature authorizing release of the transcript, and a \$5 check or money order payable to Buffalo State College. All checks or money orders must include the student's Banner ID number.

Transcript requests by telephone cannot be honored. Requests are filled in the order they are received. Sufficient time is necessary for processing. Requests for transcripts should be made well in advance of the date needed.

Unit of Credit

The credit hour is the unit of course credit. It represents completion of one 50-minute class period per week for one semester. A course having three class periods a week will earn 3 credit hours. Studio, laboratory, and shop classes usually earn 1 credit for each two hours of attendance. The college expects student preparation of two hours for each hour in class.

Student Complaints, Grievances, and Appeals

Buffalo State complies with New York State Education regulations requiring that campuses have procedures in place for filing complaints and seeking resolution of perceived problems.

Academic Appeals: Waiver of Academic Regulations

Students are expected to adhere to all regulations of the college. However, unusual and extenuating circumstances may warrant a modification of certain regulations.

Students should not request a waiver of any regulations without very strong evidence to justify the waiver. Requests for waivers are made by completing an Academic Appeals Petition in the Academic Standards Office, Twin Rise 100.

The director of academic standards makes decisions on requests for waivers that do not relate to a student's major after consulting with the Academic Appeals Committee. The director's decision is final. A minimum of one month is necessary to process academic appeals.

Decisions on requests for a waiver related to a student's major are made by the appropriate department chair in accordance with procedures established by the department or area faculty.

Student Complaints Regarding Discrimination

If the complaint involves alleged harassment or discrimination based on race, sex, ethnicity, national origin, sexual orientation, religion, age, disability, or marital or veteran status, the student should use procedures administered through the Equity and Campus Diversity Office. Acts of discrimination should be reported immediately to this office for confidential discussion of the alleged acts. Students have 45 days from the alleged act of discrimination or 45 days after receipt of a grade to file a complaint. A copy of the procedures may be obtained in Cleveland Hall 415

Student Complaints Regarding Nonacademic Issues

If the complaint involves nonacademic issues, the student should deal with procedures administered by the Dean of Students Office, Campbell Student Union 306. However, students are encouraged to seek resolution of the perceived problem directly in the unit in question before initiating processes that are more formal.

Student Complaints Regarding Academic Issues

The procedures outlined in the next section pertain to complaints about academic issues other than those dealing with waiver of collegewide academic regulations or graduation issues, which are addressed by petitions to the Academic Appeals Committee. The college seeks to resolve student grievances as promptly and informally as possible. No adverse action will be taken against any student initiating a complaint.

Students who feel aggrieved regarding any aspect of the academic program have a right to request a resolution by bringing the matter to the attention of the appropriate college personnel. The academic appeals process regarding a waiver of academic regulations is outlined in the Waiver of Academic Regulations section. If the perceived problem pertains to a grade or the conduct of a particular course, students should follow the Student Academic Grievance Procedures, below.

Student Academic Grievance Procedures

The procedures that follow pertain to alleged violations or misapplication of college and/or course policies. They are also directed at a student grievance alleging that the student has been treated unfairly, in violation of established academic policy or practice. These procedures reflect the college's commitment to a fair and prompt resolution of student academic grievances.

These procedures begin with an informal process, but include a formal process that centers on hearings and recommended resolution of the grievance in a way that maximizes the opportunity for a full and impartial solution. Request to waive or otherwise alter college academic policies shall continue to be the province of the Academic Appeals Committee (see Waiver of Academic Regulations section).

The procedures below do not deal with grievances that are based on issues of sexual harassment or discrimination. Such grievances are handled through the Equity and Campus Diversity Office. Similarly, complaints that deal with other nonacademic issues are administered by the Dean of Students Office (see previous section).

For academic grievances, students are advised to retain all documentation from the course, including (but not limited to) the syllabus, tests, quizzes, papers, and any graded evaluations. These materials are required to substantiate any grievance.

1. Jurisdiction

A grievance shall include, but not be restricted to, a complaint by a student:

- a. That college regulations and/or policies have been violated or misapplied to him or her.
- b. That he or she has been treated unfairly, defined in terms of established academic policy or practice governing or affecting students at the college.

2. Time Limit

- a. At the informal level before the fifth week of the following semester.
- b. At the formal level before the 10th week of the following semester.

3. Grievance Resolution Process

The process includes the possibility of hearings at two levels: the department and the school.

a. At the department level, a student with a complaint should attempt to resolve the complaint informally with the faculty or staff member involved. The assistance of the chair may be sought to resolve the dispute to the satisfaction of both parties. A student must initiate the process no later than five weeks into the following semester. The student who is not able to achieve resolution with the instructor may initiate a formal grievance or grade appeal process no later than 10 weeks into the following semester by preparing a written statement, which includes:

1. A statement of the case in detail.
2. All information about the conference with the instructor.
3. A statement of the reasons the student believes he or she is aggrieved or, in the case of a grade, why it should be reconsidered.
4. All relevant supporting materials, which should be identified and listed in an index.

The student shall submit complete copies of the written statement and attachments to the chair of the department and the faculty member identified in the grievance. The chair shall carefully review the statement, confer with the student and instructor, and attempt to reach a resolution of the dispute. The chair may ask members of the department to serve as a committee to review the materials and assist him or her in reaching a decision. The chair's response must be made within 10 days of the date of the student's request.

In conformance with state regulations, the department shall maintain adequate documentation about each formal complaint and its disposition for at least six years after final disposition of the complaint. If the department chair is the party against whom the grievance is brought, the student should initiate a review at the dean's level, which follows.

b. If the matter is not resolved to the student's satisfaction at the departmental level, he or she may request a hearing at the school level by writing to the dean of the school and forwarding the documentation to that office. The request must be made within 10 academic days of the receipt of the recommendation of the department chair.

The dean or designee shall convene a three-person committee drawn from a panel of available faculty within 10 days. Such committee shall include one faculty member from the department in which the faculty member resides. Furthermore, after the committee is constituted, the faculty member and the student have the right to review the committee membership and request alternate members in the event it is believed a member of the committee is not neutral. The committee shall meet and review the materials presented and solicit a response from the instructor to each count of the student's case. In the case of a grade appeal, the committee will familiarize itself with the standards and objectives of the course and evaluative material presented. Concerns shall be limited to consideration of the fairness of the application of the standards and objectives, and whether the standards and objectives were made known to the student in a reasonable manner. The difficulty of the standards shall not be an issue.

The burden of proof shall be on the student, who may be asked to appear before the committee.

In the case of a grade appeal, if the majority of the committee feels no case can be made, the original grade will remain. If it finds that the standards and objectives were not reasonably known to the student or were unfairly applied, it may recommend a different grade and give its reasons for so recommending. The committee shall report its findings in writing to the student, the instructor, and the dean.

If the panel recommends a different grade, the instructor shall have 10 working days from receipt of the panel's report to inform the dean of the school of the intent to change the grade. If necessary, the dean may direct that the grade be changed. A change of grade shall not be interpreted as an admission of unfairness in grading.

In the case of a grievance, if the majority of the committee members adjudge the grievance to be without foundation, written notification of their findings will be forwarded to the student, the instructor, and the dean of the school. If, in the judgment of the committee, there is a basis for the grievance, a written report will be forwarded to the dean of the school with specific recommendations for redress. Copies shall be forwarded to the student and the instructor.

The dean of the school will notify all parties of his or her final decision regarding the grievance within 10 working days of receipt of the committee's findings and recommendations.

In conformance with state regulations, the dean's office shall maintain adequate documentation about each formal complaint and its disposition for at least six years after the final disposition of the complaint.

4. Committees

Committee members shall be drawn from a list of faculty nominated by departments. In naming the committee to hear a grievance, the dean shall take care to ensure that no member has an interest in the case being heard.

5. Confidentiality

Once the grievance committee has been convened to hear a complaint, principals and committee members shall have the obligation to maintain the confidentiality of the proceedings and of all materials presented.

6. Review

This procedure must be reviewed after two years. The review process should identify any irregularities in grade changes. To facilitate this review, a copy of all documentation/findings at the formal level shall be retained in the department office.

Complaints to State Education Department

Any individual who continues to feel aggrieved after pursuing the options outlined previously, is unable to resolve the problems, or believes the institution has not properly addressed the concerns may file a written complaint with the State Education Department within three years of the alleged incident. The complainant may telephone the Postsecondary Complaint Registry to request a complaint form at (212) 951-6493 or write to the New York State Education Department, Postsecondary Complaint Registry, One Park Ave., 6th Floor, New York, NY 10016.

Students Unable to Attend Classes on Certain Days Because of Religious Beliefs

1. No person shall be expelled from or be refused admission as a student to an institution of higher education because he or she is unable, due to religious beliefs, to register for or attend classes, or to participate in any examination, study, or work requirements on a particular day or days.

2. Any student in an institution of higher education who is unable, because

of his or her religious beliefs, to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused from any examination or any study or work requirements.

3. It shall be the responsibility of the faculty and the administrative officials of each institution of higher education to make available to each student who is absent from school, because of his or her religious beliefs, an equivalent opportunity to register for classes or make up any examination, study, or work requirements that he or she may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to the said student such equivalent opportunity.

4. If registration, classes, examinations, study, or work requirements are held on Friday after 4 p.m. or on Saturday, similar or makeup classes, examinations, study, or work requirements shall be made available on other days, where it is possible and practical to do so. No special fees shall be charged to the student for these classes, examinations, study, or work requirements held on other days.

5. In effectuating the provisions of the Education Law, it is expected that faculty and administrative officials will exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to any student for availing himself or herself of the provisions of this section.

6. Any student who is aggrieved by the alleged failure of any faculty or administrative official to comply in good faith with the provisions of this section shall be entitled to maintain an action or proceeding in the supreme court of the county in which such institution of higher education is located for the enforcement of his or her rights under this section.

7. The term "religious beliefs" shall mean beliefs associated with any corporation organized and operated exclusively for religious purposes, which is not disqualified for tax exemption under Section 501 of the United States Code.

8. At Buffalo State College, we sharpen the mandate of the state and endorse the policy that prohibits administering evaluative examinations on Rosh Hashanah, Yom Kippur, and Good Friday.

The Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) affords students the following rights with respect to their education records:

1. The right to inspect and review student education records within 45 days of the day the college receives a request for access. Students should submit to the registrar, dean, head of the academic department, or other appropriate official a written request that identifies the record(s) they wish to inspect. The college official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the college official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of student education records that the student believes are inaccurate or misleading. Students may ask the college to amend records that they believe are inaccurate or misleading. Students should write the college official responsible for record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. If the college decides not to amend the record as requested by the student, the college will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding hearing procedures will be provided to students when they are notified of the right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in student education records, except to the extent that FERPA authorizes disclosure without consent.

One exception that permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the college in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the college has contracted (such as an attorney, auditor, or collection agent); a person serving on the College Council; a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks; and National Student Loan Clearinghouse officials. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

Upon request, the college discloses education records without consent to officials of other schools to which a student seeks admission or intends to enroll.

Buffalo State hereby designates the following categories of student information as public or directory information. Such information may be disclosed by the institution for any purpose at its discretion:

a. Name, address, e-mail address, telephone number, dates of attendance, part-time/full-time status, class.

b. Most recent institution(s) attended, major field-of-study, awards, honors (includes dean's list), degree(s) conferred (including dates).

c. Past and present participation in officially recognized sports and activities, physical factors (height, weight of athletes), date and place of birth, photographs.

Currently enrolled students may withhold disclosure of any category of information under the Family Educational Rights and Privacy Act of 1974. To withhold disclosure, written notification must be received by September 15 in the Registrar's Office, Moot Hall 210, Buffalo State College, 1300 Elmwood Avenue, Buffalo, NY 14222-1095. Nondisclosure of information will commence thereafter and be effective until September 14 of the following year. Written notification to withhold disclosure must be made each academic year. Buffalo State assumes that failure on the part of any student to specifically request the withholding of categories of directory information by the deadline date indicates approval for disclosure.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Buffalo State to comply with the requirements of FERPA. Address written complaints to: Family Policy Compliance Office, U.S. Department of Education, 600 Independence Avenue SW, Washington, DC 20202-4605.

Assessment

Buffalo State is committed to continuous improvement through assessment. Periodically students are expected to participate in assessment activities designed to elicit information that serves as a basis for quality improvement in our programs and services.

FINANCES

Students are required to pay tuition and fees upon receipt of invoice with cash, credit card, or through a deferred payment plan. If a student is receiving financial aid, he or she must attach a copy of the financial aid award notice with payment. The amount of financial aid received will be deducted from the amount due.

Room and board charges must be paid prior to arrival on campus. These charges are usually included in the tuition and fees bill. *The rates listed below are subject to review and may change without prior notice.*

Further information concerning payment is available in the Student Accounts Office, Moot Hall 260, (716) 878-4121 or online at www.buffalostate.edu/studentaccounts.

Explanation of Terms

Full time — A student registered for 12 or more credit hours a semester is considered a full-time student.

Part time — A student registered for 1 to 11 credit hours a semester is considered a part-time student.

Semester — An academic year at the college consists of a fall semester and a spring semester. Yearly expenses are twice the semester rate.

Resident (for tuition purposes)— As established by the State University Board of Trustees, an individual university registrant is considered a New York State resident and is charged in-state tuition rates when that individual is determined to have a permanent and principal home in New York State for 12 months prior to registration. Those who do not meet this requirement are presumed to be out-of-state residents and are charged out-of-state tuition rates unless satisfactory proof is presented to show that domicile in New York State has, in fact, been established.

Tuition

Tuition for full-time Buffalo State College graduate students is \$3,450 per semester for New York State residents and \$5,460 per semester for out-of-state students. Tuition for part-time graduate students is \$288 per credit hour for New York State residents and \$455 per credit hour for out-of-state residents.

Tuition for Undergraduate Coursework

Matriculated (degree-seeking) graduate students pay graduate tuition rates for any undergraduate coursework taken, regardless of its applicability to the student's degree program.

Postbaccalaureate, premajor, undeclared, and nondegree students are charged undergraduate tuition rates for undergraduate coursework and graduate tuition rates for graduate coursework. Full-time registration cannot be less than \$2,175 or more than \$3,450 (New York State resident tuition rates).

Fees

College Fee

A mandatory college fee of \$12.50 per semester for full-time students and \$.85 per credit hour for part-time students is collected by all units of the State University system to finance the operating budget.

Health Fee

All full-time students are required to pay a \$115 per semester health fee; part-time students pay \$9.60 per credit hour per semester. This fee provides basic medical assistance to students on campus through the Weigel Health Center. A mandatory health fee is collected by all units of the State University system.

Waiver for off-site distance-education students

Students enrolled exclusively in off-campus or distance learning courses with no on-campus meetings are eligible for a waiver or refund of the student health fee (not the mandatory health insurance), provided they are not concurrently enrolled in on-campus courses. If a student is enrolled in both on-campus and off-campus or distance learning courses, the health fee applies to all courses for which the student is registered. The Weigel Health Center is responsible for processing health fee waivers. More information and refund forms are available at www.buffalostate.edu/weigel or contact the Weigel Health Center at (716) 878-6711.

Technology Fee

A mandatory technology fee of \$160 per semester for full-time students and \$13.50 per credit hour for part-time students is collected to provide enhancements to campus technology.

Parking Fee

Students who wish to park on campus pay \$70 per academic year and \$10 for summer-only permits.

Room and Board

The residence hall room rate is \$2,677 per semester for a double-occupancy room. Room rental does not include telephone service, which students arrange with the telephone company. Moore Complex apartments start at \$4,369 per semester. Meal plan rates vary, starting at \$1,325 per semester.

Miscellaneous Expenses

Miscellaneous expenses will vary depending on the student's academic program, personal spending habits, and commute distance.

Mandatory Student Health Insurance

The Buffalo State College student health insurance plan has been developed especially for Buffalo State College students. The plan provides coverage for sickness and injuries that occur on and off campus and includes cost-saving features to keep the coverage as affordable as possible.

All full-time domestic undergraduate and graduate students who attend Buffalo State College are eligible and automatically enrolled in the Buffalo State College student health insurance plan unless a waiver form with proof of health insurance coverage is returned to the college's Weigel Health Center by the applicable deadline.

Part-time domestic students are eligible to purchase this coverage; however, they are not automatically enrolled in the plan. Spouse and dependent coverage is available.

Please visit www.buffalostate.edu/weigel for enrollment information or a waiver form or contact the Weigel Health Center at (716) 878-6711.

International students must purchase the SUNY International Health Insurance or have comparable coverage.

International Student Health Insurance

All international students must enroll in a group health insurance plan available through Buffalo State College. If students carry a health insurance policy that provides coverage comparable to the SUNY-mandated health insurance, it may be accepted as an alternative, if approved by the director of the Weigel Health Center. The premium was \$951 per year for August 2007 through August 2008. There also are rates for coverage during any semester. The premium is subject to change each year. All American students studying abroad must carry this insurance.

Summer Session Tuition and Fees

Tuition and fees are charged at the credit-hour rate for all courses taken during summer session.

An Estimated Budget

Estimated college costs can be found in the following table for the 2008–2009 academic year. Costs may vary according to a student's place of residence, academic program, and individual needs. All tuition rates, fees, and fines are subject to change without notice as directed by the State University Board of Trustees

Estimated Budget Per Semester for 2008–2009

New York State Resident

	Commuter	Resident
Fixed costs (per semester)		
Tuition	\$3,450.00	\$3,450.00
Fees	\$287.50	\$287.50
Total fixed costs	\$3,737.50	\$3,737.50
Variable costs (per semester)		
Books and supplies	\$450.00	\$450.00
Maintenance at home	\$1,855.00	—
Room	—	\$2,677.00
Board	—	\$1,855.00
Miscellaneous expenses	\$500.00	\$500.00
Transportation	\$600.00	\$600.00
Total variable costs	\$3,405.00	\$6,082.00
Estimated total costs/semester	\$7,142.50	\$9,819.50
Estimated annual costs		
(two semesters)	\$14,285.00	\$19,639.00

Time Payment Plan

The college has established a payment plan to assist students and their families in meeting the cost of tuition, fees, and room and board. Payment plan applications may be obtained from the Student Accounts Office, Moot Hall 260, (716) 878-4121, or the Financial Aid Office, Moot Hall 230, (716) 878-4901.

Refund Policies

All financial refunds are sent to students in the following order:

1. Transferred electronically to the student's bank account if a direct deposit application is on file in the Student Accounts Office;
2. Mailed to the student's local address of record on file in the Registrar's Office if the student is not a resident student;
3. Mailed to the permanent address of record on file in the Registrar's Office.

Graduate students are responsible for informing the Graduate School of any address change. Send e-mail to gradoffc@buffalostate.edu, or download a data change form at www.buffalostate.edu/registrar/forms.xml and fax it to (716) 878-5630.

Tuition

Tuition refunds will be processed only if the student officially withdraws through the Registrar's Office. Students given permission to cancel their registration are responsible for payment of tuition according to the following schedule:

Date of Course Withdrawal	Tuition Liability
<i>Spring and Fall Semesters</i>	
First week of class*	0%
Second week	30%
Third week	50%
Fourth week	70%
After fourth week	100%
<i>Summer Sessions</i>	
First two days of Session A, B, or C	0%
Third day through end of first week of Session A or B	50%
Third day through end of first week of Session C	65%
Second week of Session A, B, or C	100%

*The first week of class ends on Saturday of the week in which classes are scheduled.

Room Rentals

During the fall and spring semesters, a refund can be made only if a student withdraws due to circumstances beyond his or her control. Questions covering refunds are addressed in the residence hall license.

Board Charges

Refunds are calculated according to college and federal regulations and guidelines, less a \$20 service charge for processing. No refunds are given after the drop/add period at the start of each semester. Contact the Buffalo State Campus Dining Services Office, Campbell Student Union 223, for additional information.

College Fee

Health Fee

Technology Fee

These fees are refunded only when registration is canceled during drop/add period.

Parking Fee

The parking fee is refundable within the first two weeks of class upon surrender of the parking permit.

Service Fees

The following fees are administered to comply with mandatory State University of New York policy:

Late Registration Fee

Registrations on "late registration day" (the first day of classes) or later are charged a mandatory \$40 late registration fee that cannot be waived or deferred. Exceptions are registrations for graduate workshops, independent study, special projects, contracts, and courses requiring performance auditions. Registrations for independent study, special projects, or contracts turned in after the second week of classes that generate the only registration for a student also are assessed the \$40 late fee.

Billing Fee

A billing fee of \$30 is assessed to each delinquency notice sent by the college. Late filing of financial aid does not waive this fee. All financial aid should be filed by March 1.

Late Payment Fee

A \$30 fee is charged if the final semester bill is not paid by the due date.

Late Drop/Add Fee

A \$20 late drop/add fee is charged for each transaction after the first week of classes. Independent study, special projects, or contracts added after the second week of classes also are charged this fee.

Academic Transcript Fee

There is a \$5 fee for each transcript request.

Returned-Check Fee

A \$20 fee is charged for each check returned by the bank or any declined credit card transaction. The fee is nondeferrable and cannot be waived. An additional billing fee is charged on any transaction covering a course and/or room registration. If payment is not received within 10 days from the date of notification, the account is referred to the New York State Attorney General's Office for collection and handling.

Graduate Admission Application Fee

A nonrefundable \$50 processing fee (for first-time applicants) must accompany the application for admission to a graduate program at Buffalo State. Payment of the fee is not contingent on any action or decision the college may render on the application, or on any subsequent decision by the applicant to withdraw the application.

New York State Debt Collection Mandate

The State University reserves the right to withhold academic records from any student who has not satisfied or made provision to satisfy all obligations incurred in the State University system. Unpaid accounts are, in due course, turned over to an external collection agency. Collection costs are added to the amount of indebtedness.

Teacher Waiver Certificates

Supervising (critic) teacher tuition waiver certificates may be redeemed in accordance with the regulations printed on the certificate. A student must be a full-time teacher in the district to use a waiver certificate. A certificate may be redeemed for any term scheduled to begin after the effective date but prior to the expiration date on the certificate.

Waivers may be transferred between professional employees of the same school district. Transferred certificates must be signed by the district administrator.

If a student withdraws from a course at a time when partial or full tuition liability exists, the waiver certificate is forfeited. Waiver certificates do not cover college fees, which must be paid by the student. Transferred waivers are not accepted after the fourth week of classes. For summer session, transferred waivers are not accepted after the first registration date of any session.

FINANCIAL AID

Although the primary responsibility for paying for college rests with the student and family, the goal of the Financial Aid Office is to assist students with finding funding where family resources fall short. Each year, between 65 percent and 70 percent of students receive some form of financial aid while attending Buffalo State. This is usually a combination of grant aid (scholarships or other funding that is considered a gift), student loans (money that must be repaid), and student employment (work programs where students earn money on a weekly basis to help with their expenses).

Financial Aid Office staff members are available year round to assist students with the application process and to answer questions related to the receipt of their aid. Specific questions can be directed to the Financial Aid Office, Moot Hall 230, (716) 878-4901, finaid@buffalostate.edu. Additional information is available at www.buffalostate.edu/financialaid.

Application Procedures

The process of applying for financial aid requires time and planning. The Financial Aid Office makes every effort to process aid requests quickly and accurately. Students can assist this process by applying early (March or earlier) and by promptly responding to all requests for additional documentation.

Federal Student Aid

All students must file the Free Application for Federal Student Aid (FAFSA) after January 1 of each year to receive aid for the following fall/spring award year. Award packaging starts on February 15 of each year for the following fall/spring. To receive the maximum aid package, it is important to apply early, as some aid has limited funding and is awarded on a first-come, first-served basis. By filing the FAFSA, students are applying for all federal grant, loan, and work programs administered by the Financial Aid Office.

Though the FAFSA is available in paper form it is strongly recommended that students complete the FAFSA electronically at www.fafsa.ed.gov. To expedite this process a student will need to have a federal pin number. Pin numbers can be requested at www.pin.ed.gov. The pin number serves as the

individual's electronic signature on the FAFSA and gives access to confidential information on the Internet.

After submitting the FAFSA a student will receive a Student Aid Report (SAR) from the federal processor. Students who supplied an e-mail address on the FAFSA will receive an e-mail with a link to an electronic version of the SAR on the web which they can access and print out. Review the SAR carefully for errors and the appropriate school listing(s). If errors are found, students must correct them. Contact the Financial Aid Office with questions.

At times, Buffalo State may require additional documentation to complete the award process. This may include the submission of tax forms and other documents. This is done to confirm eligibility of a student to receive aid and/or to ensure the accuracy of information provided on the FAFSA. If selected, students and spouses are required to provide the office with the requested documentation before aid will be offered or disbursed.

Tuition Assistance Program (TAP)

TAP is a grant program for New York State residents who are enrolled full time (12 or more credits per semester, 9 credits if the student has a graduate assistantship). To apply for a TAP grant from New York State, students must first complete the FAFSA. When students file the FAFSA electronically, they have the option of completing the TAP application at the end of the process, or they can complete it at www.tapweb.org at a later date. Upon review, the New York State Higher Education Services Corporation (HESC) will send a notice of TAP eligibility to the student for the terms desired.

Graduate Tuition Scholarship Opportunity Program (EOP, SEEK, HEOP)

The State University of New York offers a Graduate Tuition Scholarship Opportunity Program to eligible students who are New York State residents and graduates of SUNY's Educational Opportunity Program (EOP); City University of New York's Search for Education, Elevation, and Knowledge (SEEK) Program; or the Higher Educational Opportunity Program (HEOP) conducted by private colleges. Applicants must provide written verification of participation in EOP, HEOP, or SEEK.

For additional information, contact the Graduate School, Cleveland Hall 204, (716) 878-5601, www.buffalostate.edu/graduateschool/scholarships.xml.

SUNY Graduate Diversity Fellowship Program

The State University of New York offers a fellowship program to recruit, enroll, and retain students who will contribute to the diversity of the student body in SUNY's graduate and professional programs. Applicants must be U.S. citizens or permanent residents and pursuing their first master's degree. A student who is awarded a Graduate Diversity Fellowship must enroll full time (12 graduate credit hours in his or her degree program) each semester to receive a stipend (currently \$7,000 annually) and full tuition scholarship. College fees are paid by the student. Fellows must maintain a 3.0 cumulative GPA each semester to continue to receive funding. Fellowships are available for fall and spring semesters only. For details and an application, contact the Graduate School or go to www.buffalostate.edu/graduateschool/fellowships.xml.

Graduate Assistantships

Graduate assistantships are available through various academic departments and administrative offices on campus. Duties of graduate assistants consist of nonteaching functions such as grading papers, monitoring exams, assisting in administrative assignments, or participating in research projects.

Assignments range from 12 to 20 hours per week and provide stipends from \$3,000 to \$6,000 per academic year. A graduate assistant may receive a tuition award and a stipend. Graduate assistants are considered full time when registered for 9 graduate credits per semester. A tuition scholarship, if awarded, is for a maximum of 9 graduate credits each fall/spring semester. Stipends and/or tuition awards do not cover college fees, which are the responsibility of the student.

Every graduate student appointed to an assistantship must be in good academic standing in a degree program (M.S., M.A., M.Ed., M.P.S.) and maintain a full-time registration concurrent with the appointment.

Application forms may be obtained from the department or office offering the assistantship. A list of available assistantships can be found at www.buffalostate.edu/offices/hr/jobs.asp

Veterans Benefits

Veterans and children or spouses of veterans who are deceased or have service-connected disabilities may be able to receive aid for approved postsecondary study. Applications are available in the Veterans Certification Office in Moot Hall 141. Questions about aid eligibility should be directed to the Department of Veterans Affairs.

Aid for Students with Disabilities

Students with disabilities pursuing higher education may be eligible for assistance through the State Office of Vocational and Educational Services for Individuals with Disabilities (VESID). Criteria and funding vary. Applications and eligibility requirements may be obtained at the Buffalo-area VESID office. Further information is available from the Special Services for Students with Disabilities Office in Twin Rise, South Wing 120.

Aid to Native Americans

The Bureau of Indian Affairs administers a grant program through the American Indian Graduate Center (AIGC) that offers supplementary financial assistance for students pursuing postbaccalaureate degree programs. Students must be an enrolled member of a federally recognized Indian/Alaska Native tribe in the United States and apply for campus-based financial aid through the federal financial aid process at Buffalo State by June 1.

For an application or additional information, contact the American Indian Graduate Center at (800) 628-1920, www.aigc.com, or 4520 Montgomery Boulevard, NE Suite 1-B, Albuquerque, NM 87109.

Summer Session Aid

Summer Session financial aid at Buffalo State is currently limited to Federal Stafford Loans, Federal Graduate Plus Loans and, in limited cases, TAP grants. Students wishing to apply for aid for the summer sessions must complete the supplemental summer application that becomes available at the Financial Aid Office when registration for summer sessions begins in April. Since summer aid eligibility is dependent upon students not having exhausted their eligibility in the fall or spring semesters, it is advisable that students seek advice prior to registering for classes.

Eligibility for Financial Aid

Eligibility for financial aid is based on many factors, including matriculation status, enrollment status, financial need, satisfactory academic progress, and program pursuit.

Matriculation

To be eligible for most forms of financial aid, a student must be a U.S. citizen or eligible noncitizen matriculated into a degree or certificate program. Students taking continuing education courses, some visiting students, and special-status students who have been allowed to take courses but have not been formally accepted by the college are considered nonmatriculated and are not eligible for financial aid. Students with bachelor's degrees taking courses required by the state for teacher certification may borrow a Federal Perkins Loan or a Federal Stafford Loan at the undergraduate limits for such programs even though they are not actually pursuing a degree. Undeclared (premajor) graduate students also can take out loans at the same annual limit as those students pursuing teacher certification for one year if they are enrolled in preparatory coursework. Preparatory coursework does not include courses taken solely to raise one's GPA to meet graduate admission standards and does not include coursework in a graduate degree program.

Enrollment Status

In most cases, students must be enrolled at least half time (6 credits) in courses that are part of their degree program to be eligible for financial aid. To receive TAP, students must be enrolled full time (12 credits or 9 credits if student has a graduate assistantship). For TAP, the 12 credits cannot include illegal repeats (i.e., a course that previously received a passing grade for which a student is trying to improve the grade).

Financial Need

Financial need is determined by taking the Cost of Attendance (an estimated budget that includes tuition, fees, room, board, books, supplies, transportation, and a personal allowance) and subtracting from it the Expected Family Contribution (EFC). The EFC is the amount of money a family can reasonably be expected to contribute as determined by the FAFSA. Aid is then awarded based on the resulting comparative measure of need. A student can be funded only up to the amount of the Cost of Attendance.

Satisfactory Academic Progress/Pursuit of Program—TAP

To receive TAP, a student must be in good academic standing. Good academic standing in regard to state aid is concerned with two components: pursuit of program and satisfactory academic progress.

Pursuit of program tracks withdrawal from courses that results in a student being enrolled less than full time in a semester. Students must complete with a passing or failing grade 50 percent of the minimum full-time credit load (12 credits or 9 credits if the student is a graduate assistant) the first and second term they receive TAP. They must complete 75 percent of the minimum full-

time credit load the third and fourth terms they receive TAP. Students who have received five or more TAP payments must complete with a passing or failing grade 100 percent of the minimum full-time load. The total number of terms a student has received TAP as a graduate and undergraduate student are used to determine the pursuit of program component.

Satisfactory academic progress looks at both a student's cumulative GPA and the accumulation of credits toward a degree. A student's satisfactory academic progress is measured on the TAP Academic Eligibility Chart (see below). Unlike pursuit of program, only TAP payments received as a graduate student are used to place a student on the eligibility chart. When reading the chart, only semesters that a student receives a TAP payment are considered. A student who first receives a TAP grant in the third semester of his/her program would be required to meet the standards represented by the first column. Students are limited to four semesters of TAP grants.

Students who fail to maintain good academic standing become ineligible for TAP until they achieve the appropriate standards without the assistance of state funding. In exceptional situations, students who become ineligible may be granted a one-time waiver of their ineligibility. All waiver requests should be submitted to the Academic Standards Office, Twin Rise 100.

TAP Academic Eligibility Chart

	<i>TAP Award Payment Number</i>			
	1st	2nd	3rd	4th
Before being certified for this payment (Having accrued this many TAP Points*)	0-5	6-11	12-17	18-23
A student must have accrued at least this many credits	0	6	15	27
With at least this cumulative GPA	0	2.75	3.00	3.00

* TAP payments are measured by TAP points. A student is usually charged 6 points each semester he or she receives TAP.

Satisfactory Academic Progress—Federal Aid

A student must be making satisfactory academic progress at the end of each term to be eligible for federal financial aid. This means a student must have a minimum cumulative GPA of 3.0 and successfully complete at least two-thirds of the credits attempted at Buffalo State (known as completion rate). The following designations are considered to be attempted but are not considered successfully completed: E, I, N, U, W, and X grades, and courses removed through the academic clemency process. Courses that are repeated to improve a grade are counted as attempted each time they are taken but are only counted as completed once. Unlike the TAP program, every semester is considered when measuring a student's progress, whether or not he or she received federal financial aid.

A student who fails to maintain cumulative GPA or meet completion rate

requirements is placed on financial aid probation. If the student is still not making satisfactory academic progress after the probationary semester, he or she may become ineligible for federal financial aid until the required standard is achieved. In exceptional situations, students who become ineligible may be granted an extension to the probationary period. All appeals of ineligibility should be submitted to the Academic Standards Office, Twin Rise 100. Readmission to the college after an absence does not automatically mean reinstatement of aid eligibility.

Students also must complete their degrees within 150 percent of the published program length as measured in credit hours or forfeit federal aid eligibility. For example, for a program requiring 30 credits, a student could not attempt more than 45 credits to complete the degree. The 150 percent limit includes transfer credits. The limit cannot be waived for any reason.

Award Notification

Students who have applied on time should receive an award letter in the late spring or early summer. The award letter offers the student a package of financial aid, which may include an estimated TAP grant, a Graduate EOP Waiver, Federal Work-Study (FWS), and subsidized or unsubsidized Federal Stafford Loans. Continuing students will receive a notice via campus e-mail directing them to view their award online at the self-service Banner site. All students are expected to accept, reduce, or decline any award offered at the Banner site. Some aid programs require additional steps to complete the application process. These steps follow.

Federal Work-Study

Students who have been awarded Work-Study are expected to conduct an individual job search from among the Work-Study positions available. Eligible students receive a letter just prior to the start of the semester with details of their Work-Study eligibility, which is to be shown during job interviews. They also receive complete instructions on how to research available positions on the financial aid Web site.

Stafford Loans

First-time borrowers must complete an entrance interview that explains a borrower's rights and responsibilities. The entrance interview can be done on the Internet and must be completed before loan funds can be disbursed.

Each student must sign a Master Promissory Note (MPN) which legally obligates him or her to repay the loan. Most students opt to complete an electronic MPN at the New York State Higher Education Services Corporation (HESC) Web site using their HESC pin number as their signature. Students opting to use a lender whose loans are not guaranteed by HESC should bring a completed MPN directly to the Financial Aid Office for hand certification. MPN's must be submitted while the student is enrolled. An MPN cannot be processed for an enrollment period that has been completed.

The MPN only need be completed once every 10 years. Subsequent loans do not require additional MPNs. However, in the second year and beyond, when the students receive Federal Stafford Loans as part of their financial aid package, they will still need to accept, reduce, or decline the loan at the self-service Banner site.

TAP

New York State TAP award notifications are sent to students directly from HESC shortly after the state budget is set each year. TAP awards are school specific and must have "SUC Buffalo" on the certificate to be valid at Buffalo State. Actual award dollars are sent directly to the Student Accounts Office.

Correspondence

The Financial Aid Office will send paper requirements, letters, and award letters to all new students until they begin attendance at Buffalo State. From that time forward, correspondence sent to students will be via their campus e-mail address. All students are responsible to monitor their e-mail and their account online at the self-service Banner site.

Aid Disbursement

When a student is billed for a semester, portions of a student's financial aid package also appear on the bill as an offset against charges. The difference between the two is owed to the school by the due date on the bill. Most grants and loans are considered deferrable aid. Work-Study is not deferrable aid in that it is given to the student in the form of a paycheck dependent upon the hours a student actually works throughout the semester. Estimates of TAP eligibility also are not deferrable. A student must have a valid TAP award certificate with "SUC Buffalo" listed as the school for TAP to be counted as an offset against the bill.

Disbursement of aid does not begin until the second week of the semester and can take up to a month to be fully disbursed. Aid is credited against charges owed the school in the order that the aid is disbursed. Once charges are paid in full, any outstanding aid is refunded to the student.

All students anticipating refunds of excess aid are strongly encouraged to sign up for direct deposit, which allows students' refunds to be electronically deposited in personal bank accounts within 48 hours of the aid being credited to their school account. Students who do not use direct deposit receive refund checks within 14 days.

Students who have aid in excess of charges also may be eligible for a bookstore deferment. A bookstore deferment is a line of credit that allows a student to purchase his or her books before aid is disbursed. The bookstore is then repaid when financial aid is disbursed. Students can request bookstore deferments in the Financial Aid Office or the Student Accounts Office prior to the end of the drop/add period each semester, summer excluded.

The Financial Aid Office also administers an emergency loan program for students needing small amounts of money prior to the disbursement of their aid. To qualify, students must have aid awarded in excess of institutional charges. Students are limited to one such loan during their tenure at Buffalo State.

Students who have not completed the aid application process and thus have not received an award letter prior to being billed are charged late fees if the bill is not paid in full by the date due. These students also are ineligible for bookstore deferments and emergency loans. Therefore, it is imperative that all students begin the aid application process in the early spring each year and complete all steps prior to the start of the academic year.

Overawards

Each year, a number of students receiving aid are overawarded. This occurs, in part, when students are awarded other forms of assistance (e.g., scholarships, tuition waivers, or loans) from outside agencies after they have accepted their award package. Students may have portions of their federal aid reduced or canceled as a result of overawards, which may leave an outstanding balance on their college accounts. Students should notify the Financial Aid Office in writing immediately if they receive additional funds that were not included in their award package.

Withdrawal from Classes

If a student who has received financial aid funds withdraws, takes a leave of absence, or drops out during a semester, a portion of the financial aid may need to be repaid to the granting institution. In some cases, a student may incur full liability for charges but only "earn" a portion of the aid he or she was awarded. In such cases, the unearned portions of aid are returned, but the student still owes the full balance to the college. Students who unofficially withdraw (i.e., stop attending classes without formally withdrawing from school) also may be subject to returning a portion of aid received. Students considering withdrawal should consult with staff in the Financial Aid Office prior to doing so.

Scholarships

The Scholarship Office in Moot Hall 230 can assist students in locating scholarships offered by agencies not affiliated with Buffalo State. Full-time graduate students also are eligible to apply for awards from the Buffalo State College Alumni Association. Applications may be obtained from the Alumni Office, Cleveland Hall 305.

SERVICES AND FACILITIES

Services and Facilities for Graduate Students

Buffalo State College's impressive research, cultural, academic, athletic, and performing arts facilities offer unlimited learning and social opportunities for those enrolled in graduate studies. In addition, the college's professional staff and offices can assist with career planning, child care, computing, counseling, dining, health care, or living arrangements (on or off campus). Special services are available for minority students, students with disabilities, international students, and veterans.

Barnes & Noble at Buffalo State Bookstore

Campbell Student Union, (716) 878-5509
<http://buffalostate.bkstore.com>

The bookstore carries a wide range of merchandise, including new and used textbooks; trade books; special-order books; emblematic clothing; art, school, and office supplies; greeting cards; gifts; and computer supplies. The store features Java-U Café. The store accepts cash, personal checks, and credit cards. A bookstore deferment program is available. The bookstore is a service of Barnes & Noble College Bookstores Inc.

Burchfield-Penney Art Center

Rockwell Hall, Third Floor, (716) 878-6011
www.burchfield-penney.org

The Burchfield-Penney Art Center at Buffalo State College is the only museum dedicated exclusively to the art and design of Western New York. It serves as a resource for students, faculty, and the community. The center holds the world's largest collection of work by renowned American watercolorist Charles E. Burchfield (1893–1967) and more than 7,000 works by other important Western New York artists. The center is accredited by the American Association of Museums and is part of the Elmwood Museum District. Admission is free to students, faculty, and staff of the college.

Campbell Student Union

Student Life Office
Campbell Student Union 400, (716) 878-4631
www.buffalostate.edu/studentlife

The Campbell Student Union, located in the center of campus, houses an eclectic blend of student services, activities, and recreation. The bookstore and Information Center are located in the union, as are the Offices of the Associate

Vice President and Dean of Students, the Associate Vice President for Campus Life, Campus Dining Services, United Students Government, International Student Affairs Office, Student Life Office, and the campus radio station, WBNY-FM 91.3. The union offers a variety of programming space, dining services, Internet access, Java-U Café, ATM machines, and several informal lounge and study areas, as well as the USG game room.

Campus Dining Services

Campbell Student Union 223, (716) 878-5214
www.buffalostate.edu/offices/dining

Campus Dining Services, located in the Student Union, provides students with a variety of food choices. Meal plans are available for both resident and commuter students. Meal plans are convenient, flexible, and economical, and they are tax free and deferrable against financial aid. Vending machines are located throughout the campus.

Career Development Center

Cleveland Hall 306, (716) 878-5811
www.buffalostate.edu/offices/cdc

The Career Development Center (CDC) provides a full range of services for graduate students, including comprehensive career planning and job-search assistance. In addition to a Web site listing full-time, part-time, and summer jobs and internships, the CDC sponsors annual recruitment events, hosts on-campus interviewing, presents job search workshops, and maintains reference files. The CDC also houses the Volunteer and Service-Learning Center, where students can find community volunteer opportunities and can identify service-learning coursework options.

Carnegie Academy for the Scholarship of Teaching and Learning

South Wing 510, (716) 878-3292
www.buffalostate.edu/orgs/castl

Buffalo State is one of 12 international institutions selected as leaders in the Carnegie Academy for the Scholarship of Teaching and Learning (CASTL). CASTL is a network of campuses around the world that provide structure and support for faculty and staff to identify ways to enrich teaching and learning in higher education. The work of faculty involved in CASTL leads to relevant, meaningful, and educational experiences for students.

Center for Excellence in Urban and Rural Education

Caudell Hall 107, (716) 878-3610
www.buffalostate.edu/centers/ceure

CEURE—Center for Excellence in Urban and Rural Education—is committed to the enhancement of high-need urban and rural schools through the recruitment, retention, and continuing education of highly qualified teachers, as well as the support of reform efforts and research about effective schools. To support educational reform and school improvement, CEURE partners with schools, community groups, foundations, and other institutions of higher education across Western New York.

CEURE offers a variety of programs and services to school partners and campus colleagues. Partnerships are developed in conjunction with our undergraduate and graduate teacher education programs and include such collaborative efforts as:

- Recruitment incentives for high-need areas and underrepresented constituencies.
- Specialized staff-development programs for teachers and administrators.
- Alternative certification opportunities for high-need subject-area teachers.
- Internship opportunities.
- Future and nascent teacher mentorship and support programs.
- School partnership projects that employ teacher education majors as tutors.
- Grant submission and program implementation.

Child Care Center (Buffalo State College Child Care Center)

Buckham Campus School, (716) 878-5335
www.buffalostate.edu/offices/bsccchild

The campus child-care center is open to the children of Buffalo State students, faculty, and staff. Accredited by the National Academy of Early Childhood Programs and licensed by the New York State Office of Children and Family Services, the center accepts children between the ages of 6 weeks and 5 years on a first-come, first-served basis. A summer school-age program is also available for children (up to age 12). The center is committed to providing developmentally appropriate programs in a safe, predictable environment, where children can develop socially, emotionally, cognitively, and physically. Tuition is based on a sliding scale.

Computing and Technology Services

Twin Rise 206, (716) 878-4611
www.buffalostate.edu/depts/cts

Computing and Technology Services supports computing hardware, software, and networking for instruction, research, and administrative activities on campus. E-mail accounts are provided to all registered students. Access to e-mail, course materials, and library resources is available via the Buffalo State College Web site. Networked computer laboratories are available for the general student population in many locations across campus, while department-specific labs are available for students registered in respective departments. A list of computer labs for general student use is available on the E. H. Butler Library Web site. Campus computer labs provide access to more than 50 instructional applications, including MS Office, Adobe Creative Suite, AutoCAD, and others. Wireless Internet access is available in several locations listed on the E. H. Butler Library Web site.

Continuing Professional Studies

Cleveland Hall 210, (716) 878-5907
www.buffalostate.edu/academics/cenc

The Continuing Education Office offers a comprehensive array of learning opportunities to meet the needs of all potential students. Working in partnership with the college's academic and public service units and research centers, the office extends the college's offerings to people of all ages and cultures within Western New York and beyond. A variety of methods is offered, including distance-education programs, workshops, seminars, traditional courses, and credit- and noncredit-bearing certificate programs.

Buffalo State College recognizes that mature students bring prior knowledge gained through life experiences and skills, and often can credit this knowledge toward a degree. This process, known as Prior Learning Assessment, can allow students to be eligible to achieve college credit for skills and knowledge they already have gained through work or other life experiences. A fee is assessed for any credits awarded.

The Continuing Education Office meets the training and development needs of many area employers. The center provides custom-designed courses, seminars, workshops, organizational and training needs analyses, and employee development programs. The center works with each organization to provide individualized programs, either on site or at the college's conference and training facilities.

Counseling Center

Weigel Health Center, Second Floor, (716) 878-4436
www.buffalostate.edu/depts/counsel

The Counseling Center provides professional psychological services to students experiencing developmental or situational difficulties that may interfere with their ability to take advantage of the educational opportunities at Buffalo State. The staff includes licensed psychologists, a substance-abuse counselor, social workers, and a part-time psychiatrist. Information shared in counseling is confidential and is protected to the full extent of the law.

Dean of Students

Campbell Student Union 306, (716) 878-4618
www.buffalostate.edu/deanofstudents

The dean of students works closely with students and student groups to further their intellectual, emotional, and social development. The dean serves as an advocate for the rights of students, and the college's judicial system and mediation services are administered through the dean's office. As a spokesperson for students, the dean helps address important student-life issues and helps foster a positive atmosphere conducive to educational excellence. The dean assists students with their campus needs and promotes high standards of academic performance, social behavior, and citizenship.

Disability Services Office

South Wing 120, (716) 878-4500, fax: (716) 878-3804
www.buffalostate.edu/offices/disabilityservices

Buffalo State ensures access to on-campus academic programs, services, and activities on campus to qualified individuals with disabilities in accordance with guidelines established by the Rehabilitation Act of 1973, Section 504, and by the Americans with Disabilities Act of 1990. This office provides advocacy and coordinates appropriate accommodations for students with disabilities. To receive services, students must contact the office, provide appropriate documentation, and meet with staff. Together, students and staff plan for support before assistance is given.

E. H. Butler Library

(716) 878-6300

www.buffalostate.edu/library

E. H. Butler Library is committed to supporting the scholarship, research, and creativity of the Buffalo State community with more than 530,000 books, 12,000 audiovisual items, subscriptions to hundreds of print periodicals, over 100 databases that provide full-text articles from more than 27,000 serials and journals, and multimedia databases that offer sound files and images. Library databases are accessible both on and off campus, allowing students to conduct research any time of the day or night right from their desktop.

The library Web site includes an online catalog, over 35 subject guides designed by reference librarians, and links to information about support services and resources offered by the library's Information Commons. Services include a Computing Help Desk, Application Support and Training Desk, Writing Help Center, and Equipment Loan. Student proctors provide peer-to-peer computer support. Librarians staff the Reference Desk every day of the week and offer an online chat service and e-mail reference. Graduate students are encouraged to schedule appointments for more in-depth research assistance. Books and articles not available at Butler Library may be requested via ILLiad, an online system for interlibrary loan that provides fast delivery of materials.

Butler Library houses the only open computer lab on campus, with approximately 200 computers, both PCs and Macs. Wireless hot spots are available in several areas of the library with networked black-and-white and color laser printers. StudyQuad, a state-of-the-art study facility with computers, is open 24/7 during the semester to provide a safe, well-lighted area for Buffalo State students to work.

Media Services houses a diverse array of DVDs and CDs, including a wide selection of boxed music sets and educational videos covering a broad range of subjects. The Curriculum Materials Lab is a special collection of teaching resources offering a variety of preschool, elementary, and secondary level books, textbooks, and award-winning children's literature. The Creative Studies Library, the largest collection of creativity books in the world, is a noncirculating collection that supports the International Center for Studies in Creativity at Buffalo State. Archives/Special Collections maintains the official and historical documents of the college dating from the 1860s, as well as a wide range of unique materials.

Butler Library is in tune with the unique needs of graduate students. Whether it is scheduling individual research appointments, providing quiet study areas, loaning books and laptop computers, maintaining a Web site rich in full-text library resources, or offering coffee, pastries, and sandwiches in the library's café, we have the best of both worlds: real and virtual. Library staff welcomes graduate students to visit in person or on the Web to explore the services and resources that will enhance and improve the academic experience at Buffalo State.

Electronic Learning Office

Bulger Communication Center 113, (716) 878-3877, toll free (866) 411-0779
www.buffalostate.edu/offices/ir/E-Learning

The Electronic Learning Office supports the design and development of credit-bearing online and hybrid courses. Staff provides instructional design and technology training for faculty using ANGEL, the college's Learning Management System, as well as Turnitin.com and other Web-related software programs supported by the college. The office also serves students by providing a list of online and hybrid courses on its Web site. The office will assist students in locating online courses within the SUNY system.

Great Lakes Center

Classroom Building C215 and Porter Avenue, Buffalo, (716) 878-4329
www.buffalostate.edu/orgs/glc

The Great Lakes Center brings together more than 25 affiliated faculty members from eight academic departments at Buffalo State to conduct research in aquatic ecology, fisheries, environmental toxicology and chemistry, urban ecology, watershed dynamics, and environmental education.

The center consists of a complex of laboratories on the main campus and an aquatic research laboratory on a 4.5-acre site at the junction of Lake Erie and the Niagara River. The Great Lakes Center also maintains the 40-foot research vessel Aquarius, and the 46-foot vessel, the Seneca. It also has an electroshocking boat, a fleet of smaller craft for near-shore sampling, and a variety of sampling instruments.

Intercollegiate Athletics

Houston Gym 234, (716) 878-3816
www.buffalostate.edu/athletics

The 70,000-square-foot Sports Complex, home to the NCAA Division III Buffalo State Bengals, comprises the Ice Arena; Houston Gymnasium with its pool, dance studios, and basketball, racquetball, and volleyball courts; and the Sports Arena. The Sports Arena boasts a 3,500-seat basketball arena, a one-tenth-mile (160-meter) indoor track, the 1,800-seat Ice Arena (Buffalo's only collegiate ice rink), and the Buffalo State College Intercollegiate Athletics Hall of Fame. Surrounding athletics facilities are Coyer Field, a softball field, practice fields, a quarter-mile (400-meter) outdoor track, and tennis courts. Students can sign up for intramural activities (including team and individual sports) or use athletic facilities with a valid Buffalo State ID. There is a membership fee to use the state-of-the-art fitness center located in Houston Gym.

International Center for Studies in Creativity

Chase Hall 244, (716) 878-6223
www.buffalostate.edu/centers/creativity

The International Center for Studies in Creativity is an internationally recognized unit within Buffalo State College. Center faculty conduct research, teach, and work with a variety of groups and organizations to improve the understanding of creativity and creative problem solving.

The history and development of the center are tied to the work of Alex F. Osborn, developer of the brainstorming technique and the creative problem solving (CPS) process. Osborn, director of the New York City-based advertising agency Batten, Barton, Durstine, and Osborn, used his work to encourage innovative thinking among his associates and, later, among young people. His successor, Sidney J. Parnes (professor emeritus), founded the center at Buffalo State in 1967.

The center's programs have a tradition of more than 40 years of research, development, and teaching in the field of creativity studies. Documentation of the program's effectiveness shows positive impact on students' personal and professional growth. The educational program consists of courses that can lead to an undergraduate minor or a master of science degree in creative studies, or a graduate certificate in creativity and change leadership. Courses help students to become better thinkers and problem solvers, and to work more effectively with groups. Skills developed in creative studies courses help improve performance in other classes and provide a competitive edge in the job market. Our alumni work in business and industry, education (all levels), the social sciences, technology, and the arts. Companies or organizations interested in change or change management find creative studies skills to be particularly useful.

In conjunction with E. H. Butler Library, the Creative Studies Special Collection comprises the largest collection of materials on creativity in the world. The collection includes print and nonprint resources, including books, curricular materials, software programs, dissertations, research projects, and theses on creative thinking and its cultivation. The Creativity-Based Information Resources (CBIR) database, maintained by the center, includes annotations of periodical literature, chapters, software, assessments, and other resources relating to the study of creativity, invention, and innovation. For more information, visit www.buffalostate.edu/orgs/cbir.

The center's academic program is enhanced by the Alex F. Osborn Visiting Professorship, which has attracted to campus some of the most important minds in creativity research to date.

International and Exchange Office

University College

South Wing 410, (716) 878-4620

This office oversees the functions of several centers and offices:

Center for China Studies

South Wing 420, (716) 878-6328

www.buffalostate.edu/centers/ccs

The center promotes and coordinates research, scholarly exchanges, academic programs, and economic development with China.

International Education Office

South Wing 410B, (716) 878-4620

www.buffalostate.edu/studyabroad

This office coordinates Buffalo State-sponsored international study in Australia, Canada, England, Italy, and Netherlands, Puerto Rico, and Spain. Faculty and staff may develop short-term study sessions in other countries as well.

International Graduate Programs for Educators Office (Formerly: International Learning Styles Center)

South Wing 430, (716) 878-6832

www.buffalostate.edu/offices/igpe

The International Graduate Programs for Educators (IGPE) Office assumes the responsibility for the development, management, and delivery of a master of science program in multidisciplinary studies, as well as professional development for education professionals working at American/International Schools. Courses are delivered at the school site, electronically or through a combined approach of on-site/online instruction, depending on the course as well as the needs of the cohort.

International Student Affairs Office

Campbell Student Union 400, (716) 878-5331

www.buffalostate.edu/offices/isa

The International Student Affairs Office offers a variety of services to international students, including academic advisement and personal counseling. In addition, the office helps students regarding visas, work permits, and immigration regulations. A three-day orientation program is provided for new international students at the beginning of each semester. The office also administers English-language competency and placement exams in conjunction with the English Department.

Performing Arts Center

Rockwell Hall 210, (716) 878-3032

www.buffalostate.edu/pac

The Performing Arts Center (PAC) at Rockwell Hall, an 856-seat multipurpose theater, hosts more than 180 events each year. Faculty and students of the Theater and Music Departments regularly present concerts here. The PAC is also home to the Buffalo City Ballet, Neglia Ballet, and numerous other community and campus events.

Research Foundation

Bishop Hall B17, (716) 878-6700

<http://rf.buffalostate.edu>

The Research Foundation at Buffalo State College, a nonprofit educational corporation, processes all grant proposals for research, educational projects, training programs, and equipment acquisitions submitted by faculty, staff, and students. Assistance is provided in identifying federal, state, and private support of researchable topics, proposal preparation, fiscal administration of funded grants and contracts, and evaluation of completed projects.

Externally funded research at the college has followed a pattern of steady and substantial growth, with numerous opportunities for graduate and research assistantships. The office works closely with the Research Foundation of the State University of New York's central office in Albany.

Residence Life Office (On-Campus Housing)

Porter Hall, (716) 878-3000

www.buffalostate.edu/offices/reslife

Graduate students who choose to live on campus generally choose to live in Moore Complex apartments, in which three to four students share a bathroom, living room, and kitchen.

The Residence Life Office supports, complements, and enhances the academic mission of the college through a dynamic residence life program that encourages individual growth and development for a diverse residential student population. Management systems ensure the orderly and effective administration of all aspects of the program, including facility management, housekeeping, and security.

Year-round housing also is provided on a space-available basis in Twin Rise North. Room and board fees must be paid in full before room assignment can be finalized.

Off-campus housing is available near campus.

Speech-Language-Hearing Clinic

Caudell Hall 150, (716) 878-3530

<http://www.buffalostate.edu/speech/clinic.xml>

The Speech-Language-Hearing Clinic provides individual and group speech, language, and hearing services to clients of all ages. Services are provided by graduate students in the Speech-Language Pathology Department under the direct supervision of clinical faculty and professional staff members who are licensed by New York State and hold the Certificate of Clinical Competence from the American Speech-Language-Hearing Association.

State-of-the-art equipment is available to aid in the diagnosis and remediation of a variety of disorders, including articulation and phonological disorders; language impairments in children; aphasia; auditory processing disorders; voice and fluency disorders; and traumatic brain injury. Communication enhancement services are available to non-native speakers of English. Services are free to Buffalo State students.

Teacher Certification Office

Caudell Hall 101, (716) 878-6121

www.buffalostate.edu/teachercertification

The Teacher Certification Office recommends Buffalo State graduates to the New York State Department of Education for teacher certification after they have completed an approved program and met all other requirements. It also assists students completing certification-only and postbaccalaureate study leading to teacher certification. The office verifies program completion for graduates applying for out-of-state certification and is a resource for a variety of teacher certification-related topics.

University Police

Chase Hall 100, (716) 878-6333

www.buffalostate.edu/offices/police

The State University Police Department at Buffalo State is the law-enforcement agency responsible for crime prevention and control, criminal investigations, traffic and parking supervision, physical plant security, disaster coordination, community policing, and the maintenance of public order.

The department offers many special services, including personal-safety awareness education, a motorist assistance program, a safety escort service, a property identification system, and a found-property department.

To make arrangements for lectures or special programs, call (716) 878-6332 or (716) 878-6612 between 8:00 a.m. and 4:00 p.m.

Parking Rules and Regulations

The rules governing motor vehicles on campus are intended to ensure maximum pedestrian and vehicular safety and to establish the most convenient arrangements possible for students, staff, and visitors. Motor vehicles may park in any of the designated areas shown on the campus map. Only vehicles with special permits authorizing them to park in spaces designated for persons with disabilities are allowed to park in such spaces. All vehicles parked on the grounds of Buffalo State must display valid college parking permits. Maps and parking permits are available in the Student Accounts Office, Moot Hall 260.

Parking is prohibited:

- On all roadways
- In all fire lanes
- On lawns, grass, or grounds
- On or over painted lines in parking areas or crosswalks
- In such a way as to interfere with free and proper use of a roadway or pedestrian crossings

The department may authorize towing of any vehicle found to be in violation of the college's rules and regulations. Violations will result in parking fines and/or summonses. The college assumes no responsibility for automobiles and/or their contents. Rules regarding parking for persons with disabilities are strictly enforced. Parking tickets may be paid in the Student Accounts Office, Moot Hall 260. For more information, call the Traffic Office at (716) 878-3041.

Crime Statistics Availability

A copy of the Buffalo State College campus crime statistics as reported annually to the U.S. Department of Education will be provided upon request. Please direct all requests to the Chief of University Police, Chase Hall, Buffalo State College, 1300 Elmwood Avenue, Buffalo, NY 14222, (716) 878-6332. Information also can be obtained from the U.S. Department of Education Web site at <http://ope.ed.gov/security> or University Police's Web site at www.buffalostate.edu/offices/police/safety.

Veterans Certification Office

Moot Hall 141, (716) 878-5045

The Veterans Certification Office assists current and prospective students who are veterans, servicepersons, or dependents or survivors of veterans with Veterans Affairs educational benefits. Information on current regulations affecting educational benefits, tutorial assistance, and dependency allowance also is provided.

Weigel Health Center

(716) 878-6711

www.buffalostate.edu/weigel

The Weigel Health Center provides health and wellness services for all registered students. In addition to diagnosing and treating illness and injury, the professional staff stresses health education and preventive medicine. Students are seen on a walk-in or appointment basis if a clinician is available. There is no charge for most services.

The Outreach Program sponsors professionals and peer educators who present talks on health issues, such as wellness, stress management, sexuality, violence, and alcohol- and other drug-abuse prevention. Educational resources are available for student research or classroom projects.

All students must be in compliance with New York State law regarding immunizations. Measles, mumps, and rubella immunizations are provided at no charge at the center for those students who need vaccinations. Students must be in compliance to register for classes. New York State Public Law also requires that all students enrolled for at least 6 semester hours complete and return the Meningitis Information Response Form to Weigel Health Center. The form is available at www.buffalostate.edu/weigel.

All full-time students are required to have health insurance. Students with their own health coverage must provide proof of insurance by applying for an insurance waiver [online] by stated deadlines. Student who have not completed waivers will be automatically enrolled in and charged for the Buffalo State College Student Accident and Sickness Plan. Part-time students are not automatically enrolled but may apply for coverage. International students must purchase SUNY international health insurance or have comparable coverage.

Whitworth Ferguson Planetarium

Science Building 118, (716) 878-4911

The Whitworth Ferguson Planetarium is a teaching tool for the college and the community. The planetarium schedules a number of educational programs and public shows attended by thousands of area school children and adults annually.

GRADUATE PROGRAMS AT BUFFALO STATE COLLEGE

School and Program Name	Degree	Department	Program Code	Major Code	Hegis Code	See:
School of Arts and Humanities						
Benjamin C. Christy, Ph.D., Dean Rockwell Hall 222						
Art Conservation	M.A. and C.A.S.	Art Conservation	MA-AH, CAS-AH	CNS	1099	Page 31
Art Education (K–12)	M.S.Ed.	Art Education	MSED-AH	AED	0831	Page 32
Art Education	PTCP+	Art Education	PBC-AH	AED	0831	Page 32
English	M.A.	English	MA-AH	ENG	1501	Page 49
English Education (7–12)	M.S.Ed.	English	MSED-AH	ENS	1501.01	Page 49
English Education (7–12)	PTCP+	English	PBC-AH	ENS	1501.01	Page 50
French Education (7–12)	PTCP+	Modern and Classical Languages	PBC-AH	FRS	1102.01	Page 50
Spanish Education (7–12)	PTCP+	Modern and Classical Languages	PBC-AH	SPS	1105.01	Page 61

Graduate-level courses are also offered in the following departments: communication, design, fine arts, modern and classical languages. *

School of Education						
Ronald S. Rochon, Ph.D., Dean Caudell Hall 114						
Adult Education	M.S. and Graduate Certificate	Educational Foundations	MS-ED, GRCT-ED	ADE	0807	Page 30
Business and Marketing Education	M.S.Ed.	Educational Foundations	MSED-ED	BME	0838.01	Page 35
Business and Marketing Education	PTCP+	Educational Foundations	PBC-ED	BME	0838	Page 36
Career and Technical Education	M.S.Ed.	Educational Foundations	MSED-ED	CTE	0839.03	Page 36
Career and Technical Education	PTCP+	Educational Foundations	PBC-ED	CTE	0839.03	Page 37
Childhood and Early Childhood Curriculum and Instruction	M.S.Ed.	Elementary Education and Reading	MSED-ED	CUR	0829	Page 39
Childhood Education (Grades 1–6)	M.S.Ed.	Elementary Education and Reading	MSED-ED	CED	0802	Page 40
Childhood Education (Grades 1–6), including initial teaching certification	M.S.Ed.	Elementary Education and Reading	MSED-ED	CET	0802	Page 41
Early Childhood Education (Birth–Grade 2)	M.S.Ed.	Elementary Education and Reading	MSED-ED	ECE	0823	Page 44
Early Childhood Education (Birth–Grade 2), including initial teaching certification	M.S.Ed.	Elementary Education and Reading	MSED-ED	ECT	0823	Page 45
Educational Leadership	C.A.S.	Elementary Education and Reading	CAS-ED	EDL	0828	Page 48
Human Resource Development	Graduate Certificate	Educational Foundations	GRTC-ED	HRD	0807	Page 52
Literacy Specialist (Birth–Grade 6)	M.S.Ed.	Elementary Education and Reading	MSED-ED	LTB	0830	Page 53
Literacy Specialist (Grades 5–12)	M.P.S.	Elementary Education and Reading	MPS-ED	LTS	0830	Page 53
Special Education: Adolescence	M.S.Ed.	Exceptional Education	MSED-ED	EXA	0808	Page 62
Special Education: Childhood	M.S.Ed.	Exceptional Education	MSED-ED	XCE	0808	Page 62
Special Education: Early Childhood	M.S.Ed.	Exceptional Education	MSED-ED	EXC	0808	Page 62
Teaching Bilingual Exceptional Individuals	M.S.Ed.	Exceptional Education	MSED-ED	BXE	0808	Page 62

School and Program Name	Degree	Department	Program Code	Major Code	Hegis Code	See:
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School of Natural and Social Sciences

Dean: Appointment Pending
Classroom Building A113

Applied Economics	M.A.	Economics and Finance	MA-NS	AEC	2204	Page 30
Biology	M.A.	Biology	MA-NS	BIO	0401	Page 33
Biology Education (7–12)	M.S.Ed.	Biology	MSED-NS	BIS	0401.01	Page 33
Biology Education (7–12)	PTCP+	Biology	PBC-NS	BGS	0401.01	Page 34
Biology Education (7–12; 5–6 extension)	PTCP+	Biology	PBC-NS	BGX	0401.01	Page 34
Chemistry Education (7–12)	M.S.Ed.	Chemistry	MSED-NS	CHS	1905.01	Page 37
Chemistry Education (7–12)	PTCP+	Chemistry	PBC-NS	CGX	1905.01	Page 38
Chemistry Education (7–12; 5–6 extension)	PTCP+	Chemistry	PBC-NS	CGX	1905.01	Page 38
Earth Science Education (7–12)	M.S.Ed.	Earth Sciences and Science Education	MSED-NA	EAS	1917.01	Page 46
Earth Science Education (7–12)	PTCP+	Earth Sciences and Science Education	PBC-NS	EGS	1917.01	Page 46
Earth Science Education (7–12; 5–6 extension)	PTCP+	Earth Sciences and Science Education	PBC-NS	EGX	1917.01	Page 47
History	M.A.	History and Social Studies Education	MA-NS	HIS	2205	Page 51
History with Museum Studies Concentration	M.A.	History and Social Studies Education	MA-NS	HIS	2205	Page 52
Mathematics Education (7–12)	M.S.Ed.	Mathematics	MSED-NS	MTS	1701.01	Page 54
Mathematics Education (7–12)	PTCP+	Mathematics	PBC-NS	MTS	1701.01	Page 55
Mathematics Education (7–12; 5–6 extension)	PTCP+	Mathematics	PBC-NS	MTX	1701.01	Page 55
Museum Studies	Graduate Certificate	History and Social Studies Education	GRTC-NS	MTS	1099	Page 57
Physics Education (7–12)	M.S.Ed.	Physics	MSED-NS	PHS	1902.01	Page 58
Physics Education (7–12), Alternative Certification	M.S.Ed.	Physics	MSED-NS	PHA	1902.01	Page 58
Social Studies Education (7–12)	M.S.Ed.	History and Social Studies Education	MSED-NS	SSS	2201.01	Page 59
Social Studies Education (7–12)	PTCP+	History and Social Studies Education	PBC-NS	SSS	2201.01	Page 59
Social Studies Education (7–12; 5–6 extension)	PTCP+	History and Social Studies Education	PBC-NS	SSX	2201.01	Page 60

Graduate-level courses are also offered in the following departments: anthropology, geography and planning, health and wellness, political science, sociology.*

School of the Professions

Gary W. Jones, Ph.D., Dean
Cleveland Hall 214

Creative Studies	M.S.	Creative Studies	MS-SP	CRS	4903	Page 42
Creativity and Change Leadership	Graduate Certificate	Creative Studies	GRCT-SP	CRT	4903	Page 43
Criminal Justice	M.S.	Criminal Justice	MS-SP	CRJ	2105	Page 43
Educational Computing	M.S.Ed.	Computer Information Systems	MSED-SP	EDC	0899	Page 48
Industrial Technology	M.S.	Technology	MS-SP	IDT	0925	Page 53
Speech-Language Pathology	M.S.Ed.	Speech-Language Pathology	MSED-SP	SLP	1220	Page 65
Student Personnel Administration	M.S.	Student Personnel Administration	MS-SP	SPD	0826	Page 65
Technology Education	M.S.Ed.	Technology	MSED-SP	TED	0839.01	Page 67
Technology Education	PTCP+	Technology	PBC-SP	TED	0839.01	Page 67

Graduate-level courses are also offered in the following departments: business, dietetics and nutrition, health and wellness, social work.*

The Graduate School

Kevin Railey, Ph.D., Dean
Cleveland Hall 204

Multidisciplinary Studies	M.A.	The Graduate School	MA-GR	MUL	4999	Page 56
Multidisciplinary Studies	M.S.	The Graduate School	MS-GR	MUL	4999	Page 56

*See course listings in this catalog, beginning on page 68.

+Postbaccalaureate Teacher Certification Program (PTCP): No degree or certificate is awarded by Buffalo State College. See program descriptions for details.

ADULT EDUCATION

Master of Science Program

Program Code: MS-ED

Major Code: ADE

Graduate Certificate Program

Program Code: GRCT-ED

Major Code: ADE

HEGIS 0807

Educational Foundations Department

Warren L. Gleckel, *Interim Chair*

Susan K. Birden, *Program Coordinator*

Bacon Hall 306, (716) 878-3905

www.buffalostate.edu/adulteducation

The master of science in adult education program prepares professionals for careers in adult education and human resource development. Community agencies employ adult educators to conduct literacy, personal development, and workforce-preparation programs. Similarly, businesses employ human resource development professionals to train new workers and retrain experienced workers. Graduates of the program are also well prepared for doctoral programs in adult education.

The graduate certificate in adult education is designed for professionals who desire graduate-level training in the discipline of adult education but do not need a master's degree. The graduate certificate program consists of four courses from the master of science in adult education program (12 credit hours: ADE 600, ADE 605, ADE 610, and ADE 625). Students who complete the certificate program and choose to continue their graduate studies at Buffalo State may request that certificate program courses be applied toward the master's degree in adult education. This program does not lead to teaching certification.

The master's program and certificate program are both offered on the Buffalo State campus and through distance learning technology at remote locations.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.5 (4.0 scale), or a master's degree from an accredited institution with a minimum GPA of 3.0 (4.0 scale).
2. Applicants who hold a bachelor's degree but do not meet either of the above criteria may be admitted if they attain a minimum combined quantitative/verbal score of 1000 on the Graduate Record Examination (GRE), attain a minimum score of 45 on the Miller Analogies Test (MAT), or complete 6 credit hours of 500-level coursework at the college as an accepted premajor student with a minimum cumulative GPA of 3.5.
3. A letter describing the applicant's interest.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Graduation Requirements: A minimum of 30 credit hours, including 12 hours in an elective field specialization, selected under advisement.

The 12-credit field specialization is developed by each student and his or her academic adviser to incorporate courses from related academic disciplines. The use of courses from related disciplines greatly enriches the ability of the program to meet the needs and goals of individual students; more than 30 departments currently offer graduate courses at Buffalo State. Examples of field specializations include administration, linguistics, literacy, English as a second language, job development, workplace learning and staff development, vocational education, counseling, human resources development, student personnel administration, multiculturalism, creativity, exceptional ability, educational foundations, criminal justice, health and wellness, educational computing, and business.

Students also must complete either a written comprehensive examination or a master's project.

Program Requirements

Required Courses.....18 cr

ADE 600	Adulthood and Development
ADE 605	Historical, Social, and Philosophical Foundations of Adult Education
ADE 610	Methods of Adult Education
ADE/CSP 624	Internship (in area of specialization)
ADE 625	Designing and Evaluating Programs for Adult Learners
EDF 689	Methods of Educational Research

Elective Field Specialization Courses.....12 cr

Select one option:

Four content courses plus comprehensive examination

or

Three content courses plus ADE 690 Master's Project

Total Required Credit Hours.....30 cr

All courses are 3 credit hours unless otherwise indicated.

APPLIED ECONOMICS

Master of Arts Program

Program Code: MA-NS

Major Code: AEC

HEGIS 2204

Economics and Finance Department

Ted P. Schmidt, *Chair*

Victor Kasper Jr., *Program Coordinator and Associate Professor*

Classroom Building B204, (716) 878-5132

www.buffalostate.edu/economics

The master of arts in applied economics is designed for students who want to improve their understanding of economics and finance, particularly those interested in or already working in:

- Financial institutions and finance departments in business and government
- Policy-oriented and community service occupations in the private and public sectors

- Economic and financial consulting and advising
- High school business, economics, and social studies education

The program's orientation toward application as opposed to theory enhances opportunities for graduates in a broad range of occupations and institutions; however, the program has prepared students for continued education at the PhD level.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.7 (4.0 scale), or a master's degree from an accredited institution with a minimum cumulative GPA of 3.0 (4.0 scale).
2. Applicants who hold a bachelor's degree but do not meet either of the above criteria may be admitted if they attain a minimum combined quantitative/verbal score of 1000 on the Graduate Record Exam (GRE), attain a minimum score of 45 on the Miller Analogies Test (MAT), or complete 6 credit hours of 500-level coursework at the college as an accepted premajor student with a minimum cumulative GPA of 3.5.
3. Three letters of reference.
4. A letter describing the applicant's interest in the program.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Graduation Requirements: A minimum of 30 credit hours at the graduate level, including a minimum of 15 credit hours at the 600 level. Students also must complete required core courses and one of the following: a master's project, a master's thesis, or a comprehensive examination. A field of specialization is recommended but not required.

Program Requirements

Required Courses.....12 cr

ECO 505	History of Economic Thought
ECO 507	Applied Microeconomic Theory
ECO 508	Applied Macroeconomic Theory
ECO 524	Applied Econometrics

Suggested Content Specialty Courses

A. Economic Policy Analysis Courses
Select three courses from the following:

ECO 600	Labor Economics
ECO 610	Economics of Education
ECO 612	Urban Economic Analysis
ECO 650	Public Finance
ECO 660	Cost-Benefit Analysis

B. Financial Economics Courses
Select three courses from the following:

ECO 650	Public Finance
FIN 619	Risk Management
FIN 622	Capital Markets
FIN 630	International Finance
FIN 645	Estate Planning and Taxation

Other Elective Courses¹.....3–9 cr

ECO 502	Workshop in Economic Education
ECO 510	Economics of Education
ECO 601	Engineering Economics (cross-listed as INT 601)

Master's Project, Master's Thesis, or Comprehensive Examination3 cr

Select one option:

ECO 690	Master's Project
ECO 695	Master's Thesis
Comprehensive Examination (0)	

Total Required Credit Hours.....30 cr

¹Selected under advisement

All courses are 3 credit hours unless otherwise indicated.

ART CONSERVATION

Master of Arts Program

Program Code: MA-AH

Major Code: CNS

Certificate of Advanced Study Program

Program Code: CAS-AH

Major Code: CNS

HEGIS 1099

Art Conservation Department

Elizabeth S. Peña, *Chair and Director*

Rockwell Hall 230, (716) 878-5025

www.buffalostate.edu/depts/artconservation

This three-year master of arts program prepares students for careers as professional conservators to care for works of artistic, historical, or cultural significance, from famous paintings to family heirlooms. The instructional program, which includes a 12-month internship at a museum or other institution, provides students with a broad background in conservation to help ensure continued professional growth throughout their careers. In their second year, students select objects, paintings, or paper conservation as a specialty. They may choose to focus on a subspecialty, such as ethnographic or archaeological objects, photographs, or books. A certificate of advanced study in art conservation is awarded with the M.A. degree.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.8 (4.0 scale).

2. Acceptable scores on the Graduate Record Examination (GRE).

3. Completion of at least the following:

a. history of art—21 credit hours. At the discretion of the department, may include up to 12 credit hours of archaeology and/or ethnography/anthropology courses that emphasize material culture.

b. chemistry—16 credit hours: a two-semester introductory (general) chemistry lecture course with accompanying laboratory sections and a two-semester organic chemistry sequence with accompanying laboratory sections. Chemistry courses for nonscience majors will not be accepted.

c. studio art (drawing, printmaking, painting, sculpture)—9 credit hours.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Application Deadline: Completed admission applications must be received by the department office no later than February 1 of the year in which admission is sought.

Program Requirements

Required Courses.....57 cr

CNS 600	Techniques of Examination and Documentation I (2)
CNS 601	Techniques of Examination and Documentation I Laboratory (1)
CNS 602	Techniques of Examination and Documentation II (2)
CNS 603	Techniques of Examination and Documentation II Laboratory (1)
CNS 604	Techniques of Examination and Documentation III (2)
CNS 605	Techniques of Examination and Documentation III Laboratory (1)
CNS 606	Techniques of Examination and Documentation IV (2)
CNS 607	Techniques of Examination and Documentation IV Laboratory (1)
CNS 610	Conservation Science: Properties and Behavior of Materials; Methods of Analysis I (2)
CNS 611	Conservation Science: Properties and Behavior of Materials; Methods of Analysis I Laboratory (1)
CNS 612	Conservation Science: Properties and Behavior of Materials; Methods of Analysis II (2)
CNS 613	Conservation Science: Properties and Behavior of Materials; Methods of Analysis II Laboratory (1)
CNS 614	Conservation Science: Properties and Behavior of Materials; Methods of Analysis III (3)
CNS 615	Conservation Science: Properties and Behavior of Materials; Methods of Analysis III Laboratory (1)
CNS 616	Conservation Science: Properties and Behavior of Materials; Methods of Analysis IV (3)
CNS 617	Conservation Science: Properties and Behavior of Materials; Methods of Analysis IV Laboratory (1)
CNS 620	Technology and Conservation of Paintings I (2)
CNS 621	Technology and Conservation of Paintings I Laboratory (1)
CNS 622	Technology and Conservation of Paintings II (2)
CNS 623	Technology and Conservation of Paintings II Laboratory (1)
CNS 624	Technology and Conservation of Paintings III (2)
CNS 630	Technology and Conservation of Works of Art on Paper I (2)
CNS 631	Technology and Conservation of Works of Art on Paper I Laboratory (1)
CNS 632	Technology and Conservation of Works of Art on Paper II (2)
CNS 633	Technology and Conservation of Works of Art on Paper II Laboratory (1)
CNS 634	Technology and Conservation of Works of Art on Paper III (2)
CNS 640	Technology and Conservation of Objects I (2)
CNS 641	Technology and Conservation of Objects I Laboratory (1)
CNS 642	Technology and Conservation of Objects II (2)
CNS 643	Technology and Conservation of Objects II Laboratory (1)
CNS 644	Technology and Conservation of Objects III (2)
CNS 685	Professionalism in Conservation I (2)
CNS 686	Professionalism in Conservation II (1)
CNS 695	Student Specialization Project (4)

Elective Courses¹.....4 cr

Select one course from the following:

CNS 626	Technology and Conservation of Paintings IV (4)
CNS 636	Technology and Conservation of Works of Art on Paper IV (4)
CNS 646	Technology and Conservation of Objects IV (4)

Internship¹.....12 cr

CNS 698	Internship Sustaining (0)
CNS 699	Internship (12)

Final Examination0 cr

May be oral and/or written.

Total Required Credit Hours73 cr

¹Selected under advisement

ART EDUCATION (K–12)

Master of Science in Education Program

Program Code: MSED-AH

Major Code: AED

HEGIS 0831

Art Education Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

National Association of Schools of Art and Design (NASAD) Accredited

Mary L. Wyrick, *Chair*

Bishop Hall 103, (716) 878-4106

www.buffalostate.edu/arteducation

The Art Education Department offers graduate studies that lead to a master of science in art education and eligibility to apply for New York State permanent/professional certification to teach art in grades kindergarten–12. This certifying degree program requires 30 credit hours of study and enables students to acquire competence in theory, research, and methodology in art. Within the required program format, students are encouraged to pursue individualized programs of study.

Advisement: Academic advisers are assigned by the department and should be consulted at all decision points; however, students remain responsible for fulfilling department and college requirements specific to the program.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale) in the major area of study and 2.5 overall, or a minimum combined quantitative/verbal score of 1000 on the Graduate Record Examination (GRE).

2. Submit a copy of a New York State Certificate of Qualification (CQ), provisional certificate, or initial certificate to teach art. If you are a recent graduate or are just completing your undergraduate program at the time of application, you must submit documentation showing that you have completed all requirements for certification (i.e., copies of test scores and certificates of workshop completion).

3. An interview with the Art Education Department chair.

Requests for exceptions to admission requirements may be directed to the department chair. In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required Courses6 cr

AED 688	Seminar
AED 689	Research

Content Specialty Courses¹15–21 cr

Art education, fine arts, design

General Studies Courses¹0–6 cr

Master's Project or Master's Thesis¹3–6 cr

AED 690	Master's Project
AED 695	Master's Thesis (6)

Total Required Credit Hours30 cr

¹*Selected under advisement*

All courses are 3 credit hours unless otherwise indicated.

ART EDUCATION

Postbaccalaureate Teacher Certification Program

Program Code: PBC-AH

Major Code: AED

HEGIS 0831

Art Education Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

National Association of Schools of Art and Design (NASAD) Accredited

Mary L. Wyrick, *Chair*

Bishop Hall 103, (716) 878-4106

www.buffalostate.edu/arteducation

This program is designed for students who have earned a baccalaureate degree with coursework in fine arts, design, and/or art education from an accredited college or university and intend to complete the coursework required for New York State certification to teach art. After successfully completing the teacher-certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

Students are expected to complete the entire sequence of coursework and are responsible for any additional certification requirements established by the New York State Teacher Certification Division, including fingerprinting and at least four state-mandated seminars. Students in the program may elect to attend part time or full time, except during the student teaching semester. Courses are offered each semester (excluding summer) during the day to accommodate practical experiences in public schools.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements: A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale) in the major area of study (fine arts, design, and/or art education) and 2.5 overall.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

First Semester12 cr

AED 200	Fundamentals of Art Inquiry
AED 300W	Foundations in Art Education
AED 301W	Theoretical Constructs in Art Education
AED 398	Computer Applications for Art Educators

Second Semester9 cr

AED 302W	Functions and Practices in Art Education
AED 315	Arts in Living
ATS 325	Art and Special Needs

Third Semester15 cr

AED 303	Elementary Student Teaching in Art (6)
AED 304	Secondary Student Teaching in Art (6)
AED 400	Student Teaching Seminar

Total Required Credit Hours36 cr

All courses are 3 credit hours unless otherwise indicated.

BIOLOGY

Master of Arts Program

Program Code: MA-NS

Major Code: BIO

HEGIS 0401

Biology Department

Gregory J. Wadsworth, *Chair*

Science Building 314, (716) 878-5203

www.buffalostate.edu/biology

The master of arts in biology prepares students for advanced research, professional employment, or study at the Ph.D. level.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.75 (4.0 scale), or a minimum combined quantitative/verbal score of 1000 on the Graduate Record Examination (GRE). The GRE general test is required; the GRE subject test in biology (B24) is strongly recommended.

2. Three letters of recommendation evaluating the applicant's academic qualifications.

3. An official transcript of the student's undergraduate program, giving evidence of satisfactory completion of 48 credit hours of college science and mathematics courses, including a minimum of 18 credit hours in biology. It is strongly recommended that this coursework also include one year of college physics, one year of organic chemistry, one semester of statistics, and one semester of calculus. The student's thesis committee may regard failure to complete these recommended undergraduate courses as a deficiency and may require such coursework for graduation.

4. A written statement of the applicant's academic background, future plans, and area of research interest.

Each applicant is strongly advised to identify a faculty sponsor and request a letter of support from him or her to accompany the admission application.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Graduation Requirements:

1. A minimum cumulative GPA of 3.0 (4.0 scale). The candidate may take no more than 36 credit hours to achieve this average.

2. A minimum of 30 credit hours, including a 6-credit-hour master's thesis. Courses in which a candidate earns a grade below C do not bear credit toward the degree but are calculated in the cumulative average.

3. Successful oral presentation of the master's thesis. The thesis must represent an original contribution to biology.

4. Two semesters of Research Seminar (BIO 617).

Program Requirements

Biology Courses ¹	22 cr
Research	2 cr
BIO 617 Research Seminar (1)	
Master's Thesis	6 cr
BIO 695 Master's Thesis (6)	
Total Required Credit Hours	30 cr

¹Selected under advisement

BIOLOGY EDUCATION (7-12)

Master of Science in Education Program

Program Code: MSED-NS

Major Code: BIS

HEGIS 0401.01

Biology Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Gregory J. Wadsworth, *Chair*

Science Building 314, (716) 878-5203

www.buffalostate.edu/biology

The master of science in biology education is designed for teachers who wish to combine advanced work in biology with graduate work in education.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.75 (4.0 scale), or a minimum combined quantitative/verbal score of 1000 on the Graduate Record Examination (GRE). The GRE general test is required; the GRE subject test in biology (B24) is strongly recommended.

2. A New York State Certificate of Qualification (CQ), provisional certificate, or initial certificate to teach science, or an approved equivalent.

3. Three letters of recommendation evaluating the applicant's academic qualifications.

4. An official transcript of the student's undergraduate program showing evidence of completion of at least 18 credit hours in biology and satisfactory preparation in chemistry, physics, and mathematics.

5. A written statement of the applicant's academic background and career goals.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Graduation Requirements:

1. A minimum cumulative GPA of 3.0 (4.0 scale). The candidate may take no more than 36 credit hours to achieve this average.

2. A minimum of 30 credit hours. Courses in which a candidate earns a grade below C do not bear credit toward the degree but are calculated in the cumulative average.

3. Successful oral presentation of the written master's project or thesis.

Program Requirements

Biology Courses ¹	12-15 cr
BIO 6XX	
Science Education Courses	9 cr
SCI 628 Seminar in Secondary Science Education	
SCI 632 Curricular Trends in Secondary School Science	
SCI 685 Evaluation in Science Education	
Elective Course	3 cr
BIO 5XX or BIO 6XX	
Master's Project or Master's Thesis	3-6 cr
<i>Select one option:</i>	
BIO 690 Master's Project	
BIO 695 Master's Thesis (6)	
Total Required Credit Hours	30 cr

¹Selected under advisement

All courses are 3 credit hours unless otherwise indicated

BIOLOGY EDUCATION (7–12)

Postbaccalaureate Teacher Certification Program

Program Code: PBC-NS

Major Code: BGS

HEGIS 0401.01

Biology Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Gregory J. Wadsworth, *Chair*

Science Building 314, (716) 878-5203

www.buffalostate.edu/biology

The biology education (7–12) postbaccalaureate teacher certification program leads to eligibility for a New York State initial certificate to teach both biology and general science in grades 7–12. This program is designed for students who have earned a baccalaureate degree in biology or a related field from an accredited college or university and intend to complete the coursework required for New York State certification to teach biology in secondary schools or general science in middle schools.

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

A minimum GPA of 2.75 in required biology courses is needed for admission to SED 405, SED 407, and SED 408.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements: A bachelor's degree in biology or a related area from an accredited college or university with a minimum GPA of 2.75 (4.0 scale) in required biology courses.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required Biology Courses27 cr

Or equivalents:

BIO 211	Introduction to Cell Biology and Genetics (4)
BIO 212	Introduction to Organismal Biology and Diversity (4)
BIO 213	Introduction to Ecology, Evolution, and Behavior (4)
BIO 303	Genetics (4)
BIO 315	Ecology (4)
BIO 405	Organic Evolution

Select one course from the following:

BIO 308/BIO 309	Human Anatomy and Physiology and Laboratory (4)
BIO 402	Comparative Animal Physiology (4)

Elective Biology Course3 cr

Any upper-division biology course except BIO 322 or BIO 324

Professional Education Courses24 cr

EDF 303	Educational Psychology
EDU 416	Teaching Literacy in Middle and Secondary Schools
EXE 372	Foundations of Teaching Adolescents with Disabilities
SCI 445	Literacy for Teaching Science
SED 200	Field Experience in Secondary Science Education
SED 401	Techniques for Teaching Laboratory Activities in the Secondary Science Classroom
SED 405	Methods and Materials for Teaching Secondary School Science
SED 409	Seminar in Secondary Science Education

Student Teaching Courses12 cr

SED 407	Practice Teaching Science in the Middle School (6)
SED 408	Practice Teaching Science in the High School (6)

Courses or Equivalent Courses in Other Fields for Certification.....35–36 cr

- A. Foreign Language Courses (6 cr)
One year or equivalent
- B. Cognate Science Courses (23 cr)
- | | |
|-----------------|--|
| CHE 111/CHE 112 | Fundamentals of Chemistry I and II (8) |
| GES 101 | Introductory Geology |
| GES 103 | Introductory Geology Laboratory (1) |
| PHY 111/PHY 112 | University Physics I and II (8) |

Select one course from the following:

GES 111	General Oceanography
GES 131	Introductory Astronomy
GES 241	Meteorology

- C. Mathematics Courses (6–7 cr)
- | | |
|---------|-----------------------------------|
| BIO 300 | Biostatistics (or equivalent) (4) |
| MAT 126 | Calculus (or equivalent) |

Total Required Credit Hours101–102 cr

All courses are 3 credit hours unless otherwise indicated.

BIOLOGY EDUCATION (7–12; 5–6 EXTENSION)

Postbaccalaureate Teacher Certification Program

Program Code: PBC-NS

Major Code: BGX

HEGIS 0401.01

Biology Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Gregory J. Wadsworth, *Chair*

Science Building 314, (716) 878-5203

www.buffalostate.edu/biology

The biology education (7–12 with 5–6 extension) postbaccalaureate teacher-certification program leads to eligibility for a New York State initial certificate to teach both biology and general science in grades 5–12. This program is designed for students who have earned a baccalaureate degree in biology or a related field from an accredited college or university and intend to complete the coursework required for New York State certification to teach biology in secondary schools or general science in middle schools.

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

A minimum GPA of 2.75 in required biology courses is needed for admission to SED 405, SED 407, and SED 408.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements: A bachelor's degree in biology or a related area from an accredited college or university with a minimum GPA of 2.75 (4.0 scale) in required biology courses.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required Biology Courses27 cr

Or equivalents:

BIO 211	Introduction to Cell Biology and Genetics (4)
BIO 212	Introduction to Organismal Biology and Diversity (4)
BIO 213	Introduction to Ecology, Evolution, and Behavior (4)
BIO 303	Genetics (4)
BIO 315	Ecology (4)
BIO 405	Organic Evolution

Select one course from the following:

BIO 308/BIO 309	Human Anatomy and Physiology and Laboratory (4)
BIO 402	Comparative Animal Physiology (4)

Elective Biology Course3 cr

Any upper-division biology course except BIO 322 or BIO 324

Professional Education Courses30 cr

EDF 303	Educational Psychology
EDU 416	Teaching Literacy in Middle and Secondary Schools
EXE 372	Foundations of Teaching Adolescents with Disabilities
SCI 323	Science as Inquiry
SCI 445	Literacy for Teaching Science
SED 200	Field Experience in Secondary Science Education
SED 310	Teaching Science in a Middle School
SED 401	Techniques for Teaching Laboratory Activities in the Secondary Science Classroom
SED 405	Methods and Materials for Teaching Secondary School Science
SED 409	Seminar in Secondary Science Education

Student Teaching Courses12 cr

SED 407	Practice Teaching Science in the Middle School (6)
SED 408	Practice Teaching Science in the High School (6)

Courses or Equivalent Courses in Other Fields for Certification.....36 cr

A.	Foreign Language Courses (6 cr) One year or equivalent
B.	Cognate Science Courses (23 cr) CHE 111/CHE 112 Fundamentals of Chemistry I and II (8) GES 101 Introductory Geology GES 103 Introductory Geology Laboratory (1) PHY 111/PHY 112 University Physics I and II (8) Select one course from the following: GES 111 General Oceanography GES 131 Introductory Astronomy GES 241 Meteorology
C.	Mathematics Courses (6-7 cr) BIO 300 Biostatistics (or equivalent) (4) MAT 126 Calculus (or equivalent)

Total Required Credit Hours.....107-108 cr

All courses are 3 credit hours unless otherwise indicated.

BUSINESS AND MARKETING EDUCATION

Master of Science in Education Program

Program Code: MSED-ED

Major Code: BME

HEGIS 0838.01

Educational Foundations Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Warren L. Gleckel, *Interim Chair*

N. John Popovich, *Program Coordinator and Associate Professor*

Bacon Hall 306, (716) 878-4717

www.buffalostate.edu/educationalfoundations

The business and marketing education program is designed to develop, extend, and enhance the professional competencies of business and marketing education teachers. Completion of the program provides a master of science in education degree and satisfies the requirements for eligibility to apply for permanent/professional certification to teach business and marketing in New York State.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.5 (4.0 scale).
2. A New York State Certificate of Qualification (CQ), provisional certificate, or initial certificate to teach business or distributive education.
3. An updated résumé.
4. Two letters of recommendation to the program.
5. An essay describing the applicant's interest in teaching, as well as business and educational background.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required Professional Courses18 cr

BME 600	Principles of Business and Marketing Education
BME 601	Research Seminar
or	
EDF 689	Methods and Techniques of Educational Research
BME 602	Curriculum Development and Planning in Business and Marketing Education
BME 604	Improving Instruction in Business and Marketing
BME 605	Evaluation in Business and Marketing Education
CTE 690 or EDF 690	Master's Project

Elective Courses15 cr

Appropriate courses that allow students to form a concentration in a specific area, such as curriculum or business. A minimum of 6 credit hours must be in business.

Total Required Credit Hours33 cr

All courses are 3 credit hours unless otherwise indicated.

BUSINESS AND MARKETING EDUCATION

Postbaccalaureate Teacher Certification Program

Program Code: PBC-ED

Major Code: BME

HEGIS 0838

Educational Foundations Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Warren L. Gleckel, *Interim Chair*

N. John Popovich, *Program Coordinator and Associate Professor*

Bacon Hall 306, (716) 878-4717

www.buffalostate.edu/educationalfoundations

This program is designed for students who have earned a baccalaureate or master's degree in business and marketing education or a business-related field from an accredited college or university, and intend to complete the coursework required for New York State certification to teach business and marketing in secondary schools. After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements:

1. A bachelor's or master's degree from an accredited college or university, with a concentration of at least 36 credit hours in business and marketing education or related courses, with a minimum GPA of 2.5 (4.0 scale). The department will accept up to 6 credit hours in computer information systems and/or economics. All other courses should match the required courses in the undergraduate business and marketing education program.
2. An updated résumé.
3. Two letters of recommendation to the Educational Foundations Department.
4. An essay indicating the applicant's interest in teaching, as well as business and marketing education and educational background.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Business and Marketing Education Courses36 cr

Accepted courses per review of Business Department

Professional Courses33 cr

BME 301	Principles of Business and Marketing Education
BME 302	Curriculum and Evaluation in Business and Marketing Education
BME 303	Instructional Strategies in Business and Marketing Education
BME 411	Applied Teaching Methods in Business and Marketing
BME 415	Student Teaching (6)
BME 416	Student Teaching (6)
EDF 303	Educational Psychology
EDU 416	Teaching Literacy in Secondary Schools
EXE 100	Nature and Needs of Individuals with Special Needs

Total Required Credit Hours69 cr

All courses are 3 credit hours unless otherwise indicated.

CAREER AND TECHNICAL EDUCATION

Master of Science in Education

Program Code: MSED-ED

Major Code: CTE

HEGIS 0839.03

Educational Foundations Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Warren L. Gleckel, *Interim Chair*

N. John Popovich, *Program Coordinator and Associate Professor*

Bacon Hall 306, (716) 878-4717

www.buffalostate.edu/educationalfoundations

The master's program in career and technical education (CTE) extends and improves the professional competencies of CTE teachers. Candidates interested in becoming certified as coordinators of diversified cooperative work-study programs may take the two related required courses: CTE 550 and CTE 555.

Advisement: Students are assigned academic advisers to plan programs based on individual needs and degree requirements. All courses should be selected by advisement.

Admission Requirement: A New York State certificate for teaching a CTE subject.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

This program is currently under revision. Contact the department for the most current information.

Program Requirements

Required Courses6 cr

BUS 602/BUS 603	Curriculum Development and Planning in Business and Marketing Education
EDF 611	Evaluation in Occupational Education

Elective Courses15–18 cr

Select five to six courses from the following:

CTE 530	Career Education: Rationale, Nature, and Concepts
CTE 536	Contemporary Methodology
CTE 550	Organization of Diversified Cooperative Work-Study Programs
CTE 555	Operation of Diversified Cooperative Work-Study Programs
CTE 600	Contemporary Issues in Occupational Education
CTE 601	Supervision of Vocational Education
CTE 602	Administration of Vocational Education
CTE 603	Selected Topics in the Organization, Administration, and Supervision of CTE
CTE 604	Technical Project
CTE 606	History and Philosophy of Occupational Education
CTE 620	Structure of Occupational Programs
CTE 625	Interrelationships of Labor, Management, and Occupational Education

Research and Master's Project or Master's Thesis6–9 cr

BUS 601/EDF 689	Research Seminar: Occupational Education
CTE 690	Master's Project
or	
CTE 695	Master's Thesis (6)

Total Required Credit Hours30 cr

All courses are 3 credit hours unless otherwise indicated.

CAREER AND TECHNICAL EDUCATION

Postbaccalaureate Teacher Certification Program

Program Code: PBC-ED

Major Code: CTE

HEGIS 0839.03

Educational Foundations Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Warren L. Gleckel, *Interim Chair*

N. John Popovich, *Program Coordinator and Associate Professor*

Bacon Hall 306, (716) 878-4717

www.buffalostate.edu/educationalfoundations

This program is designed for students who have earned a baccalaureate degree in an area other than career and technical education (CTE) from an accredited college or university, and intend to complete the coursework required for New York State certification as a career and technical teacher.

This postbaccalaureate teacher certification program prepares career and technical teachers for teaching positions in high schools, vocational schools, technical institutes, correctional facilities, and community colleges. It provides theoretical and practical preparation in planning, instructing, and managing the learning environment for students who have or will have extensive work experience in a specific trade.

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

This program is offered during the evening at Buffalo State. Some courses are offered via interactive distance learning at off-campus BOCES sites.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements:

1. A bachelor's degree from an accredited college or university in an area other than career and technical education, with a minimum cumulative GPA of 2.5 (4.0 scale).

2. Minimum of one year of work experience in a CTE area.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Occupational Competency Exams30 cr

CTE 100 Theory (or equivalent) (15)
CTE 200 Practice (or equivalent) (15)

Required Courses36 cr

CTE 301 Foundations of Career and Technical Subjects Education
CTE 302 Course Organization
CTE 306 Laboratory Management
CTE 311 Career Mentoring Internship
CTE 350 School and Community Relationship Field Experience
CTE 402 Assessment Techniques in Career and Technical Subjects
CTE 404 Methods of Teaching Career and Technical Subjects
CTE 413 Student Teaching in Career and Technical Education (6)
CTE 421 Occupational Education for Individuals with Special Needs
EDF 303 Educational Psychology
EDF 353 Human Development during Early Adolescence
ENG 470 Foundation of Language

Total Required Credit Hours36-66 cr

All courses are 3 credit hours unless otherwise indicated.

CHEMISTRY EDUCATION (7-12)

Master of Science in Education Program

Program Code: MSED-NS

Major Code: CHS

HEGIS 1905.01

Chemistry Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

M. Scott Goodman, *Chair*

Science Building 313, (716) 878-5204

www.buffalostate.edu/chemistry

The master of science in chemistry education (7-12) is designed for teachers who wish to combine advanced work in chemistry with graduate work in education.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.6 (4.0 scale) in chemistry courses.

2. A New York State Certificate of Qualification (CQ), provisional certificate, or initial certificate to teach at the secondary level.

3. A minimum of 24 credit hours of undergraduate chemistry courses, including one year of physical chemistry.

4. A minimum of one year each of calculus, general physics, biology, and geosciences.

5. Three letters of recommendation.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required Courses9 cr

Select from the following:

CHE 540 Special Topics in Organic Chemistry
CHE 550 Advanced Physical Chemistry (4)
CHE 560 Special Topics in Inorganic Chemistry
CHE 620 Kinetics and Reaction Mechanisms (4)
CHE 625 Physical Methods of Structure Determination (4)
CHE 630 Advanced Synthetic Techniques (5)
CHE 670 Biomolecules: Proteins, Nuclear Acids, and Enzymes
CHE 680 Advanced Analytical Chemistry

Science Education Courses9 cr

SCI 628 Seminar in Secondary Science Education
SCI 632 Curricular Trends in Science Teaching in the Secondary School
SCI 685 Evaluation in Science Education

Elective Courses3-6 cr

Research and Master's Project or Master's Thesis6 cr

Select from the following:

CHE 690* Master's Project in Chemistry
and
SCI 694 Research Methods and Techniques in Science Education

or
CHE 795* Master's Thesis in Chemistry (6)

*Can be counted toward both the 15-credit chemistry requirement and the 6-credit research requirement.

Total Required Credit Hours30 cr

All courses are 3 credit hours unless otherwise indicated.

CHEMISTRY EDUCATION (7–12)

Postbaccalaureate Teacher Certification Program

Program Code: PBC-NS

Major Code: CGS

HEGIS 1905.01

Chemistry Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

M. Scott Goodman, *Chair*

Science Building 313, (716) 878-5204

www.buffalostate.edu/chemistry

The chemistry education (7–12) postbaccalaureate teacher certification program leads to eligibility for a New York State initial certificate to teach both chemistry and general science in grades 7–12.

This program is designed for students who have earned a baccalaureate degree in chemistry or a related field from an accredited college or university and intend to complete the coursework required for New York State certification to teach chemistry in secondary schools or general science in middle schools.

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

A minimum GPA of 2.75 in required chemistry courses is needed for admission to SED 405, SED 407, and SED 408.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements: A bachelor's degree in chemistry or a related area from an accredited college or university with a minimum cumulative GPA of 2.75 (4.0 scale) in required chemistry courses.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required Chemistry Courses42 cr

Or equivalents:

CHE 111/CHE 112	Fundamentals of Chemistry I and II (8)
CHE 201/CHE 202	Organic Chemistry I and II (6)
CHE 203/CHE 204	Organic Chemistry Laboratory I and II (2)
CHE 301	Analytical Chemistry (4)
CHE 305/CHE 306	Physical Chemistry I and II (6)
CHE 307/CHE 308	Physical Chemistry Laboratory I and II (2)
CHE 310	Literature of Chemistry (1)
CHE 403	Instrumental Analysis (4)
CHE 460	Inorganic Chemistry
CHE 461	Inorganic Chemistry Laboratory (2)
CHE 470	Biochemistry
CHE 471	Biochemistry Techniques (1)

Professional Education Courses24 cr

EDF 303	Educational Psychology
EDU 416	Teaching Literacy in Middle and Secondary Schools
EXE 372	Foundations of Teaching Adolescents with Disabilities
SCI 445	Literacy for Teaching Science (or equivalent)
SED 200	Field Experience in Secondary Science Education
SED 401	Techniques for Teaching Laboratory Activities in the Secondary Science Classroom
SED 405	Methods and Materials for Teaching Secondary School Science
SED 409	Seminar in Secondary Science Education

Student Teaching Courses12 cr

SED 407	Practice Teaching Science in the Secondary School I (6)
SED 408	Practice Teaching Science in the Secondary School II (6)

Courses in Other Fields for Certification38 cr

- A. Foreign Language Courses (6 cr)
One year or equivalent
- B. Cognate Science Courses (23 cr)
- | | |
|-----------------|-------------------------------------|
| GES 101 | Introductory Geology |
| GES 103 | Introductory Geology Laboratory (1) |
| PHY 111/PHY 112 | University Physics I and II (8) |

Select two courses from the following:

BIO 211	Introduction to Cell Biology and Genetics (4)
BIO 212	Introduction to Organismal Biology and Diversity (4)
BIO 213	Introduction to Ecology, Evolution, and Behavior (4)

Select one course from the following:

GES 111	General Oceanography
GES 131	Introductory Astronomy
GES 241	Meteorology

C. Mathematics Courses (9 cr)

MAT 161	Calculus I
MAT 162	Calculus II
MAT 263	Calculus III

Total Required Credit Hours116 cr

¹*Selected under advisement*

All courses are 3 credit hours unless otherwise indicated.

CHEMISTRY EDUCATION (7–12; 5–6 EXTENSION)

Postbaccalaureate Teacher Certification Program

Program Code: PBC-NS

Major Code: CGX

HEGIS 1905.01

Chemistry Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

M. Scott Goodman, *Chair*

Science Building 313, (716) 878-5204

www.buffalostate.edu/chemistry

The chemistry education (7–12 with 5–6 extension) postbaccalaureate teacher certification program leads to eligibility for a New York State initial certificate to teach both chemistry and general science in grades 5–12.

This program is designed for students who have earned a baccalaureate degree in chemistry or a related field from an accredited college or university and intend to complete the coursework required for New York State certification to teach chemistry in secondary schools or general science in middle schools.

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

A GPA of 2.75 in required chemistry courses is needed for admission to SED 405, SED 407, and SED 408.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements: A bachelor's degree in chemistry or a related area from an accredited college or university with a minimum GPA of 2.75 (4.0 scale) in required chemistry courses.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required Chemistry Courses42 cr

Or equivalents:

CHE 111/CHE 112	Fundamentals of Chemistry I and II (8)
CHE 201/CHE 202	Organic Chemistry I and II (6)
CHE 203/CHE 204	Organic Chemistry Laboratory I and II (2)
CHE 301	Analytical Chemistry (4)
CHE 305/CHE 306	Physical Chemistry I and II (6)
CHE 307/CHE 308	Physical Chemistry Laboratory I and II (2)
CHE 310	Literature of Chemistry (1)
CHE 405	Instrumental Analysis (4)
CHE 460	Inorganic Chemistry
CHE 461	Inorganic Chemistry Laboratory (2)
CHE 470	Biochemistry
CHE 471	Biochemistry Techniques (1)

Professional Education Courses30 cr

EDF 303	Educational Psychology
EDU 416	Teaching Literacy in Middle and Secondary Schools
EXE 372	Foundations of Teaching Adolescents with Disabilities
SCI 323	Science as Inquiry
SCI 445	Literacy for Teaching Science (or equivalent)
SED 200	Field Experience in Secondary Science Education
SED 310	Teaching Science in a Middle School
SED 401	Techniques for Teaching Laboratory Activities in the Secondary Science Classroom
SED 405	Methods and Materials for Teaching Secondary School Science
SED 409	Seminar in Secondary Science Education

Student Teaching Courses12 cr

SED 407	Practice Teaching Science in the Secondary School (6)
SED 408	Practice Teaching Science in the Secondary School (6)

Courses in Other Fields for Certification38 cr

A. Foreign Language Courses (6 cr)

One year or equivalent

B. Cognate Science Courses (23 cr)

GES 101	Introductory Geology
GES 103	Introductory Geology Laboratory (1)
PHY 111/PHY 112	University Physics I and II (8)

Select two courses from the following:

BIO 211	Introduction to Cell Biology and Genetics (4)
BIO 212	Introduction to Organismal Biology and Diversity (4)
BIO 213	Introduction to Ecology, Evolution, and Behavior (4)

Select one course from the following:

GES 111	General Oceanography
GES 131	Introductory Astronomy
GES 241	Meteorology

C. Mathematics Courses (9 cr)

MAT 161	Calculus I
MAT 162	Calculus II
MAT 263	Calculus III

Total Required Credit Hours122 cr

¹Selected under advisement

All courses are 3 credit hours unless otherwise indicated.

CHILDHOOD AND EARLY CHILDHOOD CURRICULUM AND INSTRUCTION

Master of Science in Education Program

Program Code: MSED-ED

Major Code: CUR

HEGIS 0829

Elementary Education and Reading Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Wendy A. Paterson, *Chair*

Ellen S. Friedland, *Assistant Chair for Graduate Programs*

Bacon Hall 302, (716) 878-5916

www.buffalostate.edu/elementaryeducation

Teachers with New York State initial teaching certification in childhood or early childhood education, or provisional teacher certification in elementary education may apply for admission to the master's program in curriculum and instruction. Students who successfully complete this master of science in education program may apply for professional teaching certification (for those with initial certification) or permanent teaching certification (for those with provisional certification) from the New York State Department of Education.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.5 (4.0 scale), or a minimum combined quantitative/verbal score of 1000 on the Graduate Record Examination (GRE).

2. A New York State Certificate of Qualification (CQ) or provisional certification in elementary education, or initial certification in childhood or early childhood education. Recent graduates or students who are completing their undergraduate programs at the time of application should write in the anticipated date of certification on the admission application. Students must submit a copy of certification to the Elementary Education and Reading Department by the time they apply for degree candidacy (after completing 6 credits and before completing 12 credits).

3. A word-processed statement addressing the following:

- Professional goals for the specific program to which they are applying.
- Related professional experiences.

The statement will be evaluated according to the following criteria:

- Organization
- Conventions of language
- Content

Note: Please sign and date the statement.

4. Three letters of reference on special department forms that attest to the applicant's potential as a graduate student. Please note that two references must be from college professors/instructors. Department forms may be downloaded at www.buffalostate.edu/graduateschool/admissions.

These are the minimum criteria for admission; satisfaction of these criteria does not guarantee admission to the program. In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Seminar3cr

EDU 501	Seminar for the Reflective Teacher (to be taken early in the program)
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CHILDHOOD AND EARLY CHILDHOOD CURRICULUM AND INSTRUCTION *continued*

Multicultural Perspectives and Diversity Courses6 cr

Select one course from category A and one course from category B:

Category A

EDF 500	Multicultural Education
EDU 620	Teaching and Learning in Diverse Elementary School Classrooms
SSE 640	The Sociohistorical Context and Issues of Diversity in American Schooling

Category B

EDF 528	Human Relations
EDF 641	Social Foundations of Education
EDF 645	Social Influences on Teaching and Learning
EDU/EXE 577	Teaching Individuals with Exceptionalities in Regular Classroom
EXE 500	Individuals with Special Needs (cannot be taken by Buffalo State graduates)
SOC 506	Minorities in American Culture

Curriculum and Instructional Development Courses.....9 cr

Select three courses from the following:

EDC 600	Multimedia for Educators
EDC 604	Authoring for Educators
EDC 606	Internet for Educators
EDF 503	Educational Psychology
EDF 611	Evaluation in Education
EDU 513	Survey of Basic Concepts of Elementary Reading Instruction
EDU 534	Holistic Curriculum
EDU 535	Teaching Writing in the Elementary School
EDU 543	Curriculum for the Young Child
EDU 546	Improvement of Instruction in Language Arts
EDU 554	Social Studies in the Elementary School
EDU 574	Elementary School Curriculum
EDU 581	Enhancing and Integrating Elementary Science Instruction
EDU 609	Improving Reading in the Content Areas
EDU 611	Literacy in the Primary Grades
EDU 612	Developing Literacy through Literature
EDU 613	Assessment of English Language Arts for the Classroom Teacher
EDU 640	Conflict Resolution and Peaceable Schools
EDU 651	Improving Mathematics in the Elementary School
EDU 671	Constructing Science Understanding in the Elementary School
EDU 672	The Microcomputer in the Instructional Program
MED 600	Contemporary Mathematics Curriculum Developments
SCI 521	Lab Techniques for Elementary School Teachers
SSE 502	Teaching Social Studies

Content Distribution Courses12 cr

Select one course in each category from the department list:

- A. English language arts
- B. Social studies, history, geography, economics, or government
- C. Mathematics
- D. Science: biology, chemistry, earth science, or physics

A current list of acceptable courses is available from the department or at www.buffalostate.edu/elementaryeducation.

Research and Master's Project6 cr

EDF 689	Methods and Techniques of Educational Research
EDU 690	Master's Project

Total Required Credit Hours36 cr

All courses are 3 credit hours unless otherwise indicated.

CHILDHOOD EDUCATION (GRADES 1–6)

Master of Science in Education Program

Program Code: MSED-ED

Major Code: CED

HEGIS 0802

Note: This program is subject to change pending revisions.

Elementary Education and Reading Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Wendy A. Paterson, *Chair*

Ellen S. Friedland, *Assistant Chair for Graduate Programs*

Bacon Hall 302, (716) 878-5916

www.buffalostate.edu/elementaryeducation

Teachers with New York State initial teaching certification in early childhood education may apply for admission to the master's program in childhood education. Students who successfully complete this master of science in education program may apply for professional teaching certification from the New York State Department of Education.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.5 (4.0 scale), or a minimum combined quantitative/verbal score of 1000 on the Graduate Record Examination (GRE).

2. New York State initial certification in early childhood. Recent graduates or those who are just completing their undergraduate program at the time of application must write in the anticipated date of certification on the admission application. Submit a copy of certification to the Elementary Education and Reading Department by the time of application for degree candidacy (after completing 6 credits and before completing 12 credits).

3. A word-processed statement addressing the following:

- a) Professional goals for the specific program to which the student is applying
- b) Related professional experiences.

Statements will be evaluated according to the following criteria:

- Organization
- Conventions of language
- Content

Note: Please sign and date the statement.

4. Three letters of reference on special department forms that attest to the applicant's potential as a graduate student. Please note that two references must be from college professors/instructors. Department forms may be downloaded at www.buffalostate.edu/graduateschool/admissions.

These are the minimum criteria for admission; satisfaction of these criteria does not guarantee admission to the program. In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Seminar3 cr

EDU 501	Seminar for the Reflective Teacher (to be taken early in the program)
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Multicultural Perspectives and Diversity Courses6 cr

Select one course from category A and one course from category B:

Category A

EDF 500	Multicultural Education
EDU 620	Teaching and Learning in Diverse Elementary School Classrooms
SSE 640	The Sociohistorical Context and Issues of Diversity in American Schooling

Category B

EDF 641	Social Foundations of Education
EDF 645	Social Influences on Teaching and Learning
EDU/EXE 577	Teaching Individuals with Exceptionalities in Regular Classroom
EXE 500	Individuals with Special Needs (cannot be taken by Buffalo State graduates)
SOC 506	Minorities in American Culture

Foundation Courses	3 cr
<i>Select one course from the following:</i>	
EDF 503	Educational Psychology
EDF 528	Human Relations
EDF 611	Evaluation in Education
Curriculum Courses	6 cr
<i>Select two courses from the following:</i>	
EDU 534	Holistic Curriculum
EDU 551	Improving Mathematics in the Elementary School
EDU 554	Social Studies in the Elementary School
EDU 574	Elementary School Curriculum
EDU 640	Conflict Resolution and Peaceable Schools
EDU 671	Constructing Science Understanding in an Elementary Classroom
EDU 672	Microcomputer in the Instructional Program
Literacy Course	3 cr
<i>Select one course from the following:</i>	
EDU 513	Survey of Basic Concepts of Elementary Reading Instruction
EDU 535	Teaching Writing in the Elementary School
EDU 546	Improvement of Instruction in Language Arts
EDU 609	Improving Reading in the Content Areas
EDU 612	Developing Literacy through Literature
Methods and Practicum Course	6 cr
EDU 682	Enhancing and Integrating Elementary Math, Science, and Social Studies (6)
Elective Course	3 cr
Research and Master's Project	6 cr
EDF 689	Methods and Techniques of Educational Research
EDU 690	Master's Project
Total Required Credit Hours	36 cr

All courses are 3 credit hours unless otherwise indicated.

CHILDHOOD EDUCATION (GRADES 1–6)

Master of Science in Education Program, Including Initial Teacher Certification (MIITC)*

Program Code: MSED-ED

Major Code: CET

HEGIS 0802

Note: This program is subject to change pending revisions.

Elementary Education and Reading Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Accredited by Association of Childhood Education International

Wendy A. Paterson, *Chair*

Ellen S. Friedland, *Assistant Chair for Graduate Programs*

Bacon Hall 302, (716) 878-5916

www.buffalostate.edu/elementaryeducation

*Master Including Initial Teacher Certification

This program is designed for students who have an undergraduate degree in one of the liberal arts and sciences. It leads to an M.S. in education and eligibility to apply for initial certification in childhood education from the New York State Department of Education.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.5 (4.0 scale), or a minimum combined quantitative/verbal score of 1000 on the Graduate Record Examination (GRE).
2. An academic major or concentration in one of the liberal arts and sciences, such as American studies, English, mathematics, science, history, geography, environmental studies, or a language other than English. Certain majors are not acceptable; for example, political science, computer science, criminal justice, business.
3. A passing score on the New York State Liberal Arts and Sciences Test (LAST). Contact the Teacher Certification Office, (716) 878-6121, for details.
4. A completed Application Requirement Worksheet detailing:
 - a) College-level work in each of the following: English, mathematics, science, and social studies. Each applicant will have completed this requirement as an undergraduate or will be required to complete 6 credit hours of study in each of these four disciplines. Basic college writing courses (ENG 101 or ENG 102) do not count toward the English requirement.
 - b) Two years of high school or two semesters of college study in one foreign language (high school transcript should be submitted with application).
5. A word-processed statement addressing the following:
 - a) Professional goals for the specific program to which the applicant is applying.
 - b) Related professional experiences.

Statements will be evaluated according to the following criteria: organization, conventions of language, content.

Note: Please sign and date the statement.

6. Three letters of reference on special department forms that attest to the applicant's potential as a graduate student and as a teacher. Please note that two references must be from college professors/instructors. Department forms may be downloaded at www.buffalostate.edu/graduateschool/admissions.

These are the minimum criteria for admission; satisfaction of these criteria does not guarantee admission to the program. In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

CHILDHOOD EDUCATION (GRADES 1–6)

continued

Additional Admission Information:

- Each applicant will be evaluated in terms of his or her baccalaureate degree, academic performance, and experiential background, as well as the substance and quality of the personal statement.
- To receive initial certification, students must pass the applicable New York State certification exams.

Program Requirements

Seminar		3 cr
EDU 501	Seminar for the Reflective Teacher (to be taken early in the program)	
Multicultural Perspectives and Diversity Course		3 cr
EDU 620	Teaching and Learning in Diverse Elementary School Classrooms	
Foundation Courses		6 cr
EDF 503	Educational Psychology	
and		
<i>Select one course from the following:</i>		
EDF 528	Human Relations	
EDF 540	Human Development	
Literacy Course		3 cr
<i>Select one course from the following:</i>		
EDU 609	Improving Reading in the Content Areas	
EDU 611	Literacy in the Primary Grades	
EDU 612	Developing Literacy through Literature	
Exceptional Education Course		3 cr
EDU/EXE 577	Teaching Individuals with Exceptionalities in Regular Classroom	
Methods and Practicum Courses		30 cr
EDU 310	Teaching Social Studies in the Elementary School	
EDU 312	Teaching Math/Science in the Elementary School (6)	
EDU 400/EDU 401	Student Teaching (12)	
EDU 511	Methods of Teaching English/Language Arts (6)	
EDU 672	Microcomputer in the Instructional Program	
Mathematics Course		3 cr
One graduate course with adviser approval		
Research and Master's Project		6 cr
EDF 689	Methods and Techniques of Educational Research	
EDU 690	Master's Project	
Total Required Credit Hours		57 cr
All courses are 3 credit hours unless otherwise indicated.		

CREATIVE STUDIES

Master of Science Program

Program Code: MS-SP

Major Code: CRS

HEGIS 4903

Creative Studies Department

Gerard J. Puccio, *Chair*

Chase Hall 244, (716) 878-6223

www.buffalostate.edu/creativity

The Creative Studies Department and its International Center for Studies in Creativity credential creativity through a diverse menu of programs that cultivate skills in creative thinking, innovative leadership practices, and problem-solving techniques. The department, through the process of creative thought, enhances an individual's ability to imagine new ideas by learning how to envision that which cannot be immediately seen. This internationally recognized academic department offers a series of courses that lead to a master of science degree in creative studies or a graduate certificate in creativity and change leadership (see next program). These unique graduate programs attract students from business, education, and many diverse fields. Short summer institutes in combination with distance courses now make the graduate certificate and full master's degree available to busy professionals both within and outside Western New York. Students from across the U.S. and international students from such countries as South Africa, Brazil, Canada, Italy, England, and Singapore have participated in these programs.

The combination of required and elective courses make this graduate program ideal for educators who seek permanent and professional licensure through a degree that offers a unique and valuable set of knowledge and skills (consult with Buffalo State's Teacher Certification Office for specific issues regarding licensure in New York State). The required courses give all students an opportunity to develop practical leadership, facilitation, training/teaching, and problem-solving skills, while the selection of electives allows students to concentrate on acquiring knowledge and skills in another area of specialization (e.g., education, business, organizations, communications). The creative studies program challenges students to develop their creative talents and to become leaders of change in their professional lives.

Introductory-level graduate courses may be taken by students from other departments at Buffalo State to enrich their majors. Students from business, education, and a variety of other disciplines find this coursework useful. Multidisciplinary degree students integrate creativity courses to fulfill part of their requirements for a master's degree.

The master's degree program consists of three major strands of coursework. The Foundations of Creativity strand surveys various approaches to assessing and defining creativity, as well as a variety of models and theories associated with understanding the nature of creative behavior. The introductory course to this strand is CRS 560. The Creative Problem Solving and Facilitation strand emphasizes ways to deliberately foster creative potential by helping the student to learn, apply, and teach specific creative problem-solving tools. The introductory course to this strand is CRS 559. The third strand, Research, Development and Dissemination, includes involvement with the department's program of research, development, and dissemination. Students pursue a master's project or thesis that makes a contribution to the emerging discipline of creativity studies. The introductory course to this strand is CRS 580. Students may opt to complete a comprehensive examination and portfolio review in place of the project or thesis.

Admission Requirements:

- A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.5 (4.0 scale). Preference is shown to those with GPAs of 3.0 or higher.
- A written statement of the applicant's professional or educational goals and how a degree in creativity studies supports these goals.

3. Two letters of reference (forms provided by department or download from www.buffalostate.edu/creativity).

4. Five years of professional experience (distance program applicants only; distance students must begin with the certificate program).

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Graduate Certificate Program and Distance Graduate Program for Professionals

Those interested in pursuing any one of the program strands but not the full master's degree may complete the graduate certificate program in creativity and change leadership; see next program. Certificates are issued upon completion of at least 18 credit hours (six courses).

Program Requirements

Required Courses.....21 cr

CRS 559	Principles in Creative Problem Solving
CRS 560	Foundations of Creative Learning
CRS 580	Creativity Assessment: Methods and Resources
CRS 610	Facilitation of Group Problem Solving
CRS 625	Current Issues in Creative Studies
CRS 635	Creativity and Change Leadership
CRS 670	Foundations in Teaching and Training Creativity

Elective Courses6-12 cr

Master's Project, Master's Thesis, or Comprehensive Exam.....0-6 cr

Select one option:

Comprehensive Exam (0)	
CRS 690	Master's Project
CRS 795	Master's Thesis (6)

Total Required Credit Hours33 cr

All courses are 3 credit hours unless otherwise indicated.



Graduate Certificate Program

Program Code: GRCT-SP

Major Code: CRT

HEGIS 4903

Creative Studies Department

Gerard J. Puccio, *Chair*

Chase Hall 244, (716) 878-6223

www.buffalostate.edu/centers/creativity

Ongoing development of leadership models during the last century has drawn a close connection between creativity and leadership. At the core of many current leadership models is the concept of change—how to foster and manage it. This concept is clearly reflected in the language used to describe the essence of leadership today. For instance, many leadership theories focus on visionary, transformational, and change leadership. In addition, the view that leadership consists of a set of specific attributes that one has or does not have has shifted to a view that leadership skills can be learned.

The ability to think creatively is an essential leadership skill: the creative process brings about change. Often, a leader must act as a catalyst for change. Thus, it is imperative for leaders to learn how to facilitate their own creative thinking, as well as those they work with to bring about productive change (i.e., new products, services, resolution to problems, opportunities, etc.).

The purpose of the State University of New York graduate certificate program in creativity and change leadership is to provide students with the knowledge and skills that can put them in a better position to operate as change leaders. Leadership is a process. This certificate program teaches students how to better manage this process.

The program applies more than 50 years of research, development, and practice in the field of creativity toward leadership development. The program is not designed strictly for those in formal leadership roles; anyone can learn how to positively influence others as a leader. Leadership is about action, not position.

After completing this graduate certificate program, students can choose to continue with the master's degree in creativity.

The master's program and certificate program are offered on the Buffalo State campus and to distance students. Students who wish to earn a master's degree in creativity via distance must begin in the certificate program. Distance students are required to have five years of professional experience. For a description of the distance program (i.e., graduate certificate in creativity and change leadership for professionals), go to www.buffalostate.edu/centers/creativity/Education/Distance.html.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.5 (4.0 scale). Preference is given to those with GPAs of 3.0 or higher.

2. A written statement of the applicant's professional or educational goals and how a graduate certificate in creativity supports these goals.

3. Two letters of reference (forms provided by department, or download from www.buffalostate.edu/centers/creativity).

4. Five years of professional experience (distance learning program applicants only).

5. Successful review by the Graduate Admissions Committee.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required Courses.....15 cr

CRS 559	Principles in Creative Problem Solving
CRS 560	Foundations of Creative Learning
CRS 580	Creativity Assessment: Methods and Resources
CRS 610	Facilitation of Group Problem Solving
CRS 635	Creativity and Change Leadership

Elective Course.....3 cr

Select one course from the following:

CRS 625	Current Issues in Creative Studies
CRS 670	Foundations in Teaching and Training Creativity

Total Required Credit Hours18 cr

All courses are 3 credit hours unless otherwise indicated.



Master of Science Program

Program Code: MS-SP

Major Code: CRJ

HEGIS 2105

Criminal Justice Department

Elizabeth Szockyj, *Chair*

Classroom Building C114, (716) 878-4517

www.buffalostate.edu/criminaljustice

This program integrates theory, research, and practice that are grounded in the social sciences. The academically rigorous curriculum prepares students for leadership positions in professional criminal justice fields or for advanced graduate study.

Program graduates have a broad base of knowledge in criminal justice and related disciplines; academic skills in critical thinking, conceptualization and analysis; and an

CRIMINAL JUSTICE *continued*

in-depth understanding of the complexities of decision making, policy implementation, and planned organizational change in criminal justice.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale) in the last 60 credit hours.
2. A written statement of intent that includes the applicant's preparation for graduate study (guidelines available from the department).
3. If minimum requirements are not met, the graduate faculty may grant an applicant conditional admission to the program as a premajor if the applicant has a minimum cumulative GPA of 2.75 (4.0 scale)

AND

- a. A minimum of five years of full-time work experience in the criminal justice field. OR
 - b. A minimum combined score of 900 on the Verbal and Quantitative sections of the Graduate Record Examination (GRE).
4. Applications are reviewed on a continual basis for the fall and spring semesters.

Program Prerequisites:

1. An undergraduate descriptive and inferential statistics course from a four-year institution.
2. An undergraduate research methods course from a four-year institution.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required Core Courses9 cr

CRJ 501	Theoretical Perspectives on Crime/Criminal Justice
CRJ 504	Research Methods in Criminal Justice
CRJ 603	Administration of Criminal Justice

Elective Courses24–27 cr

Select from the following:

CRJ 508	History of Criminal Justice
CRJ 590	Independent Study
CRJ 601	Correctional Strategies
CRJ 602	Organizational Behavior and Management Process in Criminal Justice
CRJ 604	Criminal Courts
CRJ 605	Law and Social Control
CRJ 606	Law Enforcement Issues
CRJ 608	Special Topics in Criminal Justice
CRJ 620	White Collar Crime
CRJ 622	Juvenile Justice
CRJ 624	Computer Application
CRJ 625	Race and Ethnicity in Criminal Justice
CRJ 626	Gender Issues in Criminal Justice
CRJ 628	Organized Crime
CRJ 630	Constitutional Issues in Criminal Justice
CRJ 635	Criminal Justice Ethics
CRJ 710	Research Project

Up to 9 credit hours of electives may be taken outside the department with prior written approval of the student's academic adviser.

Comprehensive Examination or Master's Project0-3 cr

Select one option:

CRJ 690	Master's Project (3)
	Comprehensive Examination

Total Required Credit Hours36 cr

All courses are 3 credit hours unless otherwise indicated.

EARLY CHILDHOOD EDUCATION (BIRTH-GRADE 2)

Master of Science in Education Program*

Program Code: MSED-ED

Major Code: ECE

HEGIS 0823

*Note: This program is subject to change pending revisions.

Elementary Education and Reading Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Wendy A. Paterson, *Chair*

Ellen S. Friedland, *Assistant Chair for Graduate Programs*

Marion F. Barnett, *Program Coordinator*

Bacon Hall 302, (716) 878-5916

www.buffalostate.edu/elementaryeducation

Teachers with New York State initial teaching certification in childhood education or provisional teacher certification in elementary education may apply for admission to the master's program in early childhood education. Students who successfully complete this master of science in education program may apply for professional teaching certification (for those with initial certification) or permanent teaching certification (for those with provisional certification) from the New York State Department of Education.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.5 (4.0 scale), or a minimum combined quantitative/verbal score of 1000 on the Graduate Record Examination (GRE).
2. A New York State Certificate of Qualification (CQ) or provisional certification in elementary education, or initial certification in childhood education. Recent graduates or those who are just completing their undergraduate programs at the time of application should write in the anticipated date of certification on the admission application. Submit a copy of certification to the Elementary Education and Reading Department by the time of application for degree candidacy (after completing 6 credits and before completing 12 credits).
3. A word-processed statement addressing the following:
 - a) Professional goals for the specific program of application.
 - b) Related professional experiences.

Statements will be evaluated according to the following criteria: organization, conventions of language, content.

Note: Please sign and date the statement.

4. Three letters of reference on special department forms that attest to the applicant's potential as a graduate student. Please note that two references must be from college professors/instructors. Department forms may be downloaded at www.buffalostate.edu/graduateschool/admissions.

These are the minimum criteria for admission; satisfaction of these criteria does not guarantee admission to the program. In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Seminar3 cr

EDU 501	Seminar for the Reflective Teacher (to be taken early in the program)
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Multicultural Perspectives and Diversity Courses6 cr

Required:

EDU 528	Families and Early Childhood Programs
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Select one course from the following:

EDF 641	Social Foundations of Education
EDF 645	Social Influences on Teaching and Learning
EDU/EXE 577	Teaching Individuals with Exceptionalities in Regular Classroom
EDU 620	Teaching and Learning in Diverse Elementary School Classrooms
EXE 500	Individuals with Special Needs (cannot be taken by Buffalo State graduates)
SOC 506	Minority Groups in American Culture

Foundation Courses	3 cr
<i>Select one course from the following:</i>	
EDF 503	Educational Psychology
EDF 528	Human Relations
EDF 611	Evaluation in Education
Curriculum Courses	6 cr
EDU 543	Curriculum for the Young Child (taken before methods and practicum courses)
EXE 650	Assessment of Infants and Preschoolers with Disabilities
Literacy Courses	6 cr
<i>Select two courses from the following:</i>	
EDU 513	Survey of Basic Concepts of Elementary Reading Instruction
EDU 611	Literacy in the Primary Grades
EDU 612	Developing Literacy through Literature
Methods and Practicum Courses	6 cr
EDU 616	Integrating Theory and Practice in Programs for Infants and Toddlers
EDU 626	Integrating the Content Areas in the Teaching of Young Children (taken in the semester before or concurrent with EDF 689 and EDU 690)
Research and Master's Project	6 cr
EDF 689	Methods and Techniques of Educational Research
EDU 690	Master's Project
Total Required Credit Hours	36 cr
All courses are 3 credit hours unless otherwise indicated.	

EARLY CHILDHOOD EDUCATION (BIRTH–GRADE 2)

**Master of Science in Education Program,
Including Initial Teacher Certification (MIITC)***
Project Code: MSED-ED
Major Code: ECT
HEGIS 0823

Elementary Education and Reading Department

National Council for Accreditation of Teacher Education (NCATE) Accredited
Wendy A. Paterson, *Chair*
Ellen S. Friedland, *Assistant Chair for Graduate Programs*
Marion F. Barnett, *Program Coordinator*
Bacon Hall 302, (716) 878-5916
www.buffalostate.edu/elementaryeducation

*Master Including Initial Teacher Certification

This program is designed for students with an undergraduate degree in one of the liberal arts and sciences. It leads to an M.S. in education and eligibility to apply for initial certification in early childhood education from the New York State Department of Education.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.5 (4.0 scale), or a minimum combined quantitative/verbal score of 1000 on the Graduate Record Examination (GRE).
2. An academic major or concentration in one of the liberal arts and sciences, such as American studies, English, mathematics, science, history, geography, environmental studies, or a language other than English. Certain majors are not acceptable; for example, political science, computer science, criminal justice, business.
3. A passing score on the New York State Liberal Arts and Sciences Test (LAST). Contact the Teacher Certification Office, (716) 878-6121, for details.
4. A completed Application Requirement Worksheet detailing:
 - a) College-level work in each of the following: English, mathematics, science, and social studies. Each applicant will have completed this requirement as an undergraduate or will be required to complete 6 credit hours of study in each of these four disciplines. Basic college writing courses (ENG 101 or ENG 102) do not count toward the English requirement.

- b) Two years of high school or two semesters of college study in one foreign language (high school transcript should be submitted with application).
5. A word-processed statement addressing the following:
- a) Professional goals for the specific program of application.
 - b) Related professional experiences.

Statements will be evaluated according to the following criteria: organization, conventions of language, content.

Note: Please sign and date the statement.

6. Three letters of reference on special department forms that attest to the applicant's potential as a graduate student and as a teacher. Please note that two references must be from college professors/instructors. Department forms may be downloaded at www.buffalostate.edu/graduateschool/admissions.

These are the minimum criteria for admission; satisfaction of these criteria does not guarantee admission to the program. In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Additional Admission Information:

1. Each applicant will be evaluated in terms of his or her baccalaureate degree, academic performance, and experiential background, as well as the substance and quality of the personal statement.
2. To receive initial certification, students must pass the applicable New York State certification exams.

Program Requirements

Seminar	3 cr
EDU 501	Seminar for the Reflective Teacher (to be taken early in the program)
Exceptional Education	3 cr
EDU/EXE 577	Teaching Individuals with Exceptionalities in the Regular Classroom
Multicultural Perspectives and Diversity Courses	6 cr
<i>Required</i>	
EDU 620	Teaching and Learning in Diverse Elementary School Classrooms
<i>Select one course from the following (may be taken during student teaching):</i>	
EDU 411	Parents, School, and Community
EDU 528	Families and Early Childhood Programs (taken during student teaching)
Required Foundation Course	3 cr
<i>Select one course from the following:</i>	
EDF 503	Educational Psychology
EDF 540	Human Development
Curriculum Course	3 cr
EDU 543	Curriculum for the Young Child
Literacy Course	3 cr
<i>Select one course from the following:</i>	
EDU 611	Literacy in the Primary Grades
EDU 612	Developing Literacy through Literature
Methods and Practicum Courses	27 cr
EDU 329	Integrating Thematic Instruction Young Children (6)
EDU 400/EDU 410	Student Teaching (12)
EDU 511	Methods of Teaching English Language Arts (6)
EDU 616	Integrating Theory and Practice in Programs for Infants and Toddlers
Research and Master's Project	6 cr
EDF 689	Methods and Techniques of Educational Research
EDU 690	Master's Project
Total Required Credit Hours	54 cr
All courses are 3 credit hours unless otherwise indicated.	

EARTH SCIENCE EDUCATION (7–12)

Master of Science in Education Program

Program Code: MSED-NS

Major Code: EAS

HEGIS 1917.01

Earth Sciences and Science Education Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Gary S. Solar, *Chair*

Science Building 271, (716) 878-6731

www.buffalostate.edu/earthsciences

This program is designed for in-service teachers or those seeking science teaching certification. The earth science education program permits graduate work in any of the sciences or mathematics, in addition to required science education coursework. The program presumes an undergraduate background in geology/earth sciences; however, individuals with deficiencies may be granted conditional admittance. See the Earth Sciences and Science Education Department chair and the department Web site for details.

Students must demonstrate competencies in the following areas:

Earth sciences—historical geology, paleontology, geomorphology, astronomy, oceanography, mineralogy and petrology, meteorology

Other sciences—completion of no less than two semesters of lab-based coursework in each of the following: biology, chemistry, and physics

Science education—evaluation, secondary curricula, current issues

The usual method of demonstrating competencies in the sciences is through successful completion of graduate or undergraduate courses in the areas listed. Graduate credit is available only for courses listed as graduate. No competency may be fulfilled by examination after admission to the major.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.65 (4.0 scale).
2. A New York State Certificate of Qualification (CQ), provisional certificate, or initial certificate.
3. Three letters of recommendation that address teaching ability and academic standing.
4. Completion of two courses in earth sciences, including an introductory lab-based physical geology course, with a minimum grade of C.
5. An admission interview (at the discretion of the Admissions Committee).

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Science and Mathematics Courses15–18 cr

Science Education Courses9 cr

SCI 628	Seminar in Secondary Science Education
SCI 632	Curricular Trends in Science Teaching in the Secondary School
SCI 685	Evaluation in Science Education

Master's Project or Master's Thesis3–6 cr

Select one option:

SCI/GES 690	Master's Project
SCI/GES 795	Master's Thesis (6)

Total Required Credit Hours30 cr

All courses are 3 credit hours unless otherwise indicated.

EARTH SCIENCE EDUCATION (7–12)

Postbaccalaureate Teacher Certification Program

Program Code: PBC-NS

Major Code: EGS

HEGIS 1917.01

Earth Sciences and Science Education Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Gary S. Solar, *Chair*

Science Building 271, (716) 878-6731

www.buffalostate.edu/earthsciences

The earth science education (7–12) postbaccalaureate teacher certification program leads to eligibility for New York State initial certification to teach both earth science and general science in grades 7–12. This program is designed for students who have earned a baccalaureate degree in earth science or a related field from an accredited college or university and intend to complete the coursework required for New York State certification to teach earth science in secondary schools or general science in middle schools.

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

A minimum GPA of 3.0 (4.0 scale) in required earth science courses is needed for admission to SED 405, SED 407, and SED 408.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements: A bachelor's degree in earth science or a related area from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale) in required earth science courses.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required Earth Science Courses40 cr

GES 101	Introductory Geology
GES 102	Historical Geology
GES 103	Introductory Geology Laboratory (1)
GES 111	General Oceanography
GES 131	Introductory Astronomy
GES 241	Meteorology
GES 302	Invertebrate Paleontology (4)
GES 303	Mineralogy and Petrology (4)
GES 307	Geomorphology
GES 308	Structural Geology (4)
GES 405	Geology of North America
	One astronomy elective
	One upper-level earth science elective

Professional Education Courses24 cr

EDF 303	Educational Psychology
EDU 416	Teaching Literacy in Middle and Secondary Schools
EXE 372	Foundations of Teaching Adolescents with Disabilities
SCI 445	Literacy for Teaching Science (or equivalent)
SED 200	Field Experience in Secondary Science Education
SED 401	Techniques for Teaching Laboratory Activities in the Secondary Science Classroom
SED 405	Methods and Materials for Teaching Secondary School Science
SED 409	Seminar in Secondary Science Education

Student Teaching Courses12 cr

- SED 407 Practice Teaching Science in the Middle School (6)
- SED 408 Practice Teaching Science in the High School (6)

Courses in Other Fields for Certification28-30 cr

- A. Foreign Language Courses (6 cr)
One year or equivalent
 - B. Cognate Science Courses (22-24 cr)
- Select two biology courses from the following:*
- BIO 211 Introduction to Cell Biology and Genetics (4)
 - BIO 212 Introduction to Organismal Biology and Diversity (4)
 - BIO 213 Introduction to Ecology, Evolution, and Behavior (4)
 - CHE 111/CHE 112 Fundamentals of Chemistry I and II (8)
 - PHY 111/PHY 112 University Physics I and II (8)
- or
- PHY 107/PHY 108 General Physics I and II (6)

Total Required Credit Hours104-106 cr

All courses are 3 credit hours unless otherwise indicated.

EARTH SCIENCE EDUCATION (7-12; 5-6 EXTENSION)

Postbaccalaureate Teacher Certification Program

Program Code: PBC-NS

Major Code: EGX

HEGIS 1917.01

Earth Sciences and Science Education Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Gary S. Solar, *Chair*

Science Building 271, (716) 878-6731

www.buffalostate.edu/earthsciences

The earth science education (7-12 with 5-6 extension) postbaccalaureate teacher certification program leads to eligibility for New York State initial certification to teach both earth science and general science in grades 5-12. The program is designed for students who have earned a baccalaureate degree in earth science or a related field from an accredited college or university and intend to complete the coursework required for New York State certification to teach earth science in secondary schools or general science in middle schools.

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

A minimum GPA of 3.0 in required earth science courses is needed for admission to SED 405, SED 407, and SED 408.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements: A bachelor's degree in earth science or a related area from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale) in required earth science courses.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required Earth Science Courses40 cr

- GES 101 Introductory Geology
 - GES 102 Historical Geology
 - GES 103 Introductory Geology Laboratory (1)
 - GES 111 General Oceanography
 - GES 131 Introductory Astronomy
 - GES 241 Meteorology
 - GES 302 Invertebrate Paleontology (4)
 - GES 303 Mineralogy and Petrology (4)
 - GES 307 Geomorphology
 - GES 308 Structural Geology (4)
 - GES 405 Geology of North America
- One astronomy elective
One upper-level earth science elective

Professional Education Courses30 cr

- EDF 303 Educational Psychology
- EDU 416 Teaching Literacy in Middle and Secondary Schools
- EXE 372 Foundations of Teaching Adolescents with Disabilities
- SCI 323 Science as Inquiry
- SCI 445 Literacy for Teaching Science (or equivalent)
- SED 200 Field Experience in Secondary Science Education
- SED 310 Teaching Science in the Middle School
- SED 401 Techniques for Teaching Laboratory Activities in the Secondary Science Classroom
- SED 405 Methods and Materials for Teaching Secondary School Science
- SED 409 Seminar in Secondary Science Education

Student Teaching Courses12 cr

- SED 407 Practice Teaching Science in the Middle School (6)
- SED 408 Practice Teaching Science in the High School (6)

Courses in Other Fields for Certification28-30 cr

- A. Foreign Language Courses (6 cr)
One year or equivalent
 - B. Cognate Science Courses (22-24 cr)
- Select two biology courses from the following:*
- BIO 211 Introduction to Cell Biology and Genetics (4)
 - BIO 212 Introduction to Organismal Biology and Diversity (4)
 - BIO 213 Introduction to Ecology, Evolution, and Behavior (4)
 - CHE 111/CHE 112 Fundamentals of Chemistry I and II (8)
 - PHY 111/PHY 112 University Physics I and II (8)
- or
- PHY 107/PHY 108 General Physics I and II (6)

Total Required Credit Hours109 cr

All courses are 3 credit hours unless otherwise indicated.

ECONOMICS

See Applied Economics

EDUCATIONAL COMPUTING

Master of Science in Education Program
 Program Code: MSED-SP
 Major Code: EDC
 HEGIS 0899

Computer Information Systems Department

Lawrence W. Scott, *Chair*
 John T. Thompson, *Program Coordinator and Associate Professor*
 Chase Hall 208, (716) 878-3531
 E-mail: thompsjt@buffalostate.edu
 www.buffalostate.edu/cis

This program is designed primarily for P–12 educators who wish to develop and expand their skills in the educational application of computers in the classroom. Emphasis is on the use of computers in the instructional process. The program is significantly different from a graduate degree program in computer science or computer information systems.

Graduates of the educational computing program learn to:

- Use computers in the instructional process
- Develop evaluation criteria and evaluate educational software
- Prepare software using a variety of techniques
- Design a microcomputer system for an educational site
- Use computers in noninstructional and/or administrative settings
- Assess current and future technological trends in education
- Explore social, legal, and ethical issues involved in educational computing

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale). Students with less than a 3.0 GPA may be admitted as premajors.
2. Elementary/Secondary teaching certification is recommended.
3. Three letters of recommendation.
4. A written statement that details the applicant's previous computer experience and sets forth the applicant's career goals.
5. Previous experience with the Internet and common software tools (e.g., word processing, spreadsheet, and presentation software) is a prerequisite for full admission to the program. Students deficient in this prerequisite may be admitted as premajors.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Professional Core Courses9 cr

EDF 503	Educational Psychology
EDF 689	Methods and Techniques of Educational Research
EDU 670	Principles of Curriculum Design

Educational Computing Courses12 cr

EDC 601	Instructional Technologies
EDC 604	Authoring for Educators
EDC 672	The Microcomputer in the Instructional Program
EDC 707	Computer Applications in Education Administration

Content Core12 cr

Four courses in content in the area in which the student is seeking professional certification (for students seeking professional teaching certification)
 or
 Four electives chosen by advisement (for students not seeking professional certification)

Master's Project3 cr

EDC 690	Master's Project in Computer Applications in Instruction
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Total Required Credit Hours36 cr

All courses are 3 credit hours unless otherwise indicated.

EDUCATIONAL LEADERSHIP

Certificate of Advanced Study Program
 Program Code: CAS-ED
 Major Code: EDL
 HEGIS 0828

Elementary Education and Reading Department

Wendy A. Paterson, *Chair*
 Nancy A. Chicola, *Program Coordinator and Associate Professor*
 Bacon 302, (716) 878-5916
 www.buffalostate.edu/elementaryeducation

This post-master's degree program leads to a certificate of advanced study (CAS) in educational leadership and to New York State certification of School Building Leader.

Admission Requirements:

1. Evidence of a valid permanent or professional certificate in classroom teaching, pupil personnel service, or administration that was issued by any state or national government (submit copy).
2. A master's degree from an accredited college or university.
3. Three recommendation forms that attest to applicant's potential as an educational leader. Department forms may be downloaded at www.buffalostate.edu/graduateschool/admissions.
4. Three years of successful teaching and/or supervisory and/or pupil personnel service experience in schools or agencies (pre-K–12).
5. Statement of leadership interests, goals, and relevant professional service. See department forms for direction on writing the statement.
6. An interview providing evidence of successful leadership potential.
7. Evidence of satisfactory verbal and written English language skills.
8. Acceptable score on the Miller Analogies Test (MAT).

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements:

1. A minimum GPA of 3.0 (4.0 scale) is required to remain in the program.
2. Coursework (including transfer credit) and field and internship experiences must be completed within six years of the date of enrollment in the program.
3. An application for admission to candidacy, signed by the student, the student's academic adviser, the department chair, and the School of Education dean, must be submitted to the Graduate School after the completion of 6 credit hours and before the completion of 12 credit hours.
4. A maximum of 6 credit hours of independent study may be included in the program.
5. At the completion of 24 credit hours of coursework in EDL, students may enroll in EDL 703 (Educational Leadership Internship, a 3-credit-hour course). At the completion of the EDL 703 internship and at the completion of each field experience, a letter grade of S (Satisfactory) or U (Unsatisfactory) is awarded.
6. All coursework must receive a minimum grade of C to meet program requirements.
7. A maximum of 12 graduate-level credit hours may be transferred upon approval. Only grades of B or better will be accepted as transfer credit.

Program Requirements

Required Courses27 cr

EDL 552	Public School Law
EDL 606	School-Community Relations
EDL 607	Site-Based Leadership
EDL 612	School Business Management and Finance
EDL 630	Curriculum Leadership
EDL 631	Supervision of Teaching
EDL 702	Educational Leadership Field Experiences
EDL 703	Educational Leadership Internship
EDL 704	Seminar in Educational Change

Elective Courses	6 cr
<i>Select two courses from the following, or others under advisement:</i>	
EDL 500	Multicultural Education
EDL 559	Principles of Creative Problem Solving
EDL 560	Methods, Theories, and Models of Creative Learning
EDL 590	Advanced School Law (course by contract)
EDL 602	Administration of Special Education Programs
EDL 608	Administration of Programs for the Young Child
EDL 610	Methods of Adult Education
EDL 640	Conflict Resolution and Peaceable Schools
EDL 652	Special Education School Law
EDL 683	Facilitation of Group Problem Solving
EDL 686	Seminar in Inner City Education
EDL 706	Problems in Leadership
EDL 707	Computer Applications in Education Administration
EDL 714	Personnel Administration in Schools
EDL 715	School Administration and Research
EDL 735	Administrators and the Reading Program

Total Required Credit Hours**33 cr**
 All courses are 3 credit hours unless otherwise indicated.

ENGLISH

Master of Arts Program
 Program Code: MA-AH
 Major Code: ENG
 HEGIS 1501

English Department
 Ralph L. Wahlstrom, *Chair*
 Ketchum Hall 326, (716) 878-5417
 www.buffalostate.edu/english

The M.A. in English program is designed to provide flexibility in meeting individual student interests while ensuring a broad understanding of the significant areas within the professional study of English. The program offers in-depth study while significantly broadening students' knowledge. It also serves as an excellent preparatory program for doctoral-level study in English.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale) in English and 2.75 overall.

2. 36 credit hours in English, exclusive of freshman English.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Language Requirement:

Prior to the completion of 18 credit hours, students must demonstrate competence in one foreign language, as well as in written and oral English.

Advisement: Each student is assigned an academic adviser. All students must apply for candidacy after the completion of 6 credit hours and before the completion of 12 credit hours.

Program Requirements

Required Courses¹**18–24 cr**

Select from the following areas, so that the combined undergraduate and graduate record includes at least one course from each area:

- Linguistics or history of the English language
- Chaucer or Milton
- Shakespeare or Elizabethan writers
- Seventeenth- or eighteenth-century English literature
- Nineteenth-century English literature
- American literature
- World literature
- Twentieth-century literature
- Criticism
- Research in literature and language

Elective Courses¹**6 cr**
 In English or other academic areas

Master's Thesis, Master's Project, or Comprehensive Examination¹**0–6 cr**

Select one option:
 ENG 690 Master's Project
 ENG 695 Master's Thesis (6)
 Comprehensive Examination (0)

Total Required Credit Hours**30 cr**

¹*Selected under advisement*
 All courses are 3 credit hours unless otherwise indicated.

ENGLISH EDUCATION (7–12)

Master of Science in Education Program
 Program Code: MSED-AH
 Major Code: ENS
 HEGIS 1501.01

English Department
 National Council Accreditation of Teacher Education (NCATE) Accredited
 Ralph L. Wahlstrom, *Chair*
 Ketchum Hall 326, (716) 878-5417
 www.buffalostate.edu/english

This graduate program is designed to provide maximum flexibility in meeting individual interests while ensuring a broad understanding of the various aspects of the teaching of English. The program develops highly qualified teachers who are prepared to exercise leadership as accomplished professional educators.

Culminating Activity (students choose one of three options): In consultation with a full-time faculty member in the English education program, students choose to (1) complete the master's thesis, a traditional in-depth exploration, usually of a literary topic and/or theme; (2) complete a master's project consisting of applied research in English education; or (3) take an English comprehensive examination.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.75 (4.0 scale).

2. A New York State Certificate of Qualification (CQ), provisional certificate, or initial certificate to teach English in grades 7–12.

3. 36 credit hours in English beyond freshman composition, including preparation in linguistics, young adult literature, American literature (including ethnic American literature), British literature (including Shakespeare), and World literature.

4. 27 credit hours in professional education, including secondary English methods and student teaching in middle or secondary schools.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Advisement: Each student is assigned an academic adviser. All students must apply for candidacy after the completion of 6 credit hours and before the completion of 12 credit hours.

Program Requirements

English Courses**9–15 cr**

At least three courses must be in literature

English Education and Professional Education Courses**15–21 cr**

- EDF 500 Multicultural Education
 - ENG 691 Advanced Study in the Teaching of English
 - or
 - ENG 692 Teaching of Writing
 - ENG 693 Research in the Teaching of English
- (recommended after ENG 691 or ENG 692 when possible)*
 Two additional English education and/or professional education courses*

ENGLISH EDUCATION (7–12) *continued*

*Possible English courses: ENG 691, ENG 692, ENG 694, or ENG 670. Students may take both ENG 691 and ENG 692. Students also may select graduate courses from other appropriate departments, such as exceptional education, educational foundations, and elementary education and reading, under advisement.

Master's Project, Master's Thesis, or Comprehensive Examination0–6 cr

Select one option:

ENG 690 Master's Project
ENG 695 Master's Thesis (6)
Comprehensive Examination (0)

Total Required Credit Hours30 cr

All courses are 3 credit hours unless otherwise indicated.

ENGLISH EDUCATION (7–12)

Postbaccalaureate Teacher Certification Program

Program Code: PBC-AH

Major Code: ENS

HEGIS 1501.01

English Department

National Council Accreditation of Teacher Education (NCATE) Accredited

Ralph L. Wahlstrom, *Chair*

Ketchum Hall 326, (716) 878-5417

www.buffalostate.edu/english

The English education (7–12) postbaccalaureate teacher certification program leads to eligibility for New York State initial certification to teach English in grades 7–12. This program is designed for students who have earned a baccalaureate degree in English or a related field from an accredited college or university and intend to complete the coursework required for New York State certification to teach English in secondary or middle schools.

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

Students are responsible for any additional certification requirements, including the Liberal Arts and Sciences Test (LAST), the Assessment of Teaching Skills written test for provisional/initial certification, and child abuse certification.

It takes approximately three to four semesters to complete certification requirements at Buffalo State. Students in this program take both undergraduate- and graduate-level courses and are billed appropriately for each level. Graduate-level credits may be applied to a master's degree at Buffalo State.

Advisement: Each student is assigned an academic adviser.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.75 (4.0 scale) and a major in English (or a related discipline with a minimum of 36 credit hours in English), including courses in Shakespeare, ethnic American literature, young adult literature, and world literature.*
2. A minimum GPA of 2.75 in English coursework.*
3. Two years of high school or two semesters of college study in one foreign language.* Applicants must verify foreign language study with high school or college transcripts.
4. Coursework in exceptional education and educational technology (3 credit hours each) or demonstrated expertise in these areas.*

*Applicants who do not meet these requirements should apply as a premajor to the postbaccalaureate certificate program.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Undergraduate-Level Education Courses15 cr

EDF 403 Historical/Philosophical Forces on Secondary Education
EDU 416 Teaching Reading
ENG 311 Teaching Language
ENG 463 Methods in the Teaching of Secondary English (6)

Graduate-Level Education Courses9 cr

EDF 500 Multicultural Education
EDF 503 Educational Psychology
or
EDF 529 Adolescent Psychology
ENG 692 The Teaching of Writing

Student Teaching Courses12 cr

ENG 464/ENG 465 Supervised Student Teaching

Total Required Credit Hours36 cr

All courses are 3 credit hours unless otherwise indicated.

FRENCH EDUCATION (7–12)

Postbaccalaureate Teacher Certification Program

Program Code: PBC-AH

Major Code: FRS

HEGIS 1102.01

Modern and Classical Languages Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Deborah L. Hovland, *Chair*

William L. White, *Program Coordinator and Assistant Professor*

Bishop Hall 122, (716) 878-5414

www.buffalostate.edu/languages

The French education (7–12) postbaccalaureate teacher certification program leads to eligibility for New York State initial certification to teach French in grades 7–12.

This program is designed for students who have earned a baccalaureate degree in French or a related field from an accredited college or university and intend to complete the coursework required for New York State certification to teach French in secondary or middle schools.

The program provides the background necessary for teachers to implement the New York State learning standards for Languages Other Than English (LOTE) 7–12. It also meets the standards set by such national professional organizations as the American Council of Teachers of Foreign Languages and the National Council for Accreditation of Teacher Education.

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

It takes approximately three to four semesters to complete certification requirements at Buffalo State College.

Students are responsible for any additional certification requirements, including the Liberal Arts and Sciences Test (LAST), the Assessment of Teaching Skills written test for provisional/initial certification, and child abuse certification.

To student teach, a student must have achieved a minimum cumulative GPA of 2.75 in French coursework and overall, and must have earned a minimum grade of C in FLE 405 and FLE 406. Also, the student must complete an ACTFL-Approved Oral

Proficiency Interview (OPI) in order to demonstrate Advanced-Low Proficiency in French. If Advanced-Low Proficiency is not achieved, an additional upper-level French course, chosen in consultation with the student's advisor, must be successfully completed.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.75 (4.0 scale) and a major in French language, literature, and culture (or a related discipline with a minimum of 36 credit hours in French).*
2. A minimum GPA of 2.75 in French coursework and overall.
3. Successful completion of two written essays (one English, one French), administered by the department as part of the interview process.
4. A personal interview with the program coordinator, department chair, or other designated official.

*Applicants who do not meet these admission requirements may take courses at Buffalo State to become eligible to apply to the program.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required French Courses¹6 cr

Select two courses from the following:

FRE 305	Phonetics and Orthography
FRE 306	The Civilization of France
FRE 307	Survey of French Literature
FRE 308	Survey of French Literature
FRE 309	Survey of Nineteenth- and Twentieth-Century French Literature
FRE 410	French Poetry from Baudelaire to Present
FRE 411	Studies in French Poetry
FRE 412	Studies in the French Novel
FRE 413	Studies in French Theater
FRE 415	Advanced Grammar and Composition
FRE 416	Advanced Conversation and Composition
FRE 417	Business French
FRE 496	Seminar I
FRE 497	Seminar II

Professional Education Courses24 cr

EDF 303	Educational Psychology
EDF 403	Historical and Philosophical Foundations of Secondary Education
EDU 416	Teaching Reading in Secondary Schools
EXE 372	Foundations of Teaching Secondary Students with Disabilities
FLE 200	Field Experience in Foreign Language Education
FLE 316	Teaching Reading in a Foreign Language in Middle School
FLE 405	Methods and Materials for Teaching Foreign Languages in the Secondary Schools
FLE 406	Techniques for Teaching and Evaluating Foreign Languages in Middle and Secondary Schools

Student Teaching Courses12 cr

FLE 407	Student Teaching of Foreign Languages in the Middle/Junior High School (6)
FLE 408	Student Teaching of Foreign Languages in the High School (6)

Total Required Credit Hours42 cr

¹*Selected under advisement*

All courses are 3 credit hours unless otherwise indicated.

HISTORY

Master of Arts Program

Program Code: MA-NS

Major Code: HIS

HEGIS 2205

History and Social Studies Education Department

David A. Carson, *Chair*

Classroom Building C205, (716) 878-5412

www.buffalostate.edu/history

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale) in history and 2.75 overall.
2. 30 credit hours in history.
3. Two letters of recommendation.
4. A 500-word statement describing the applicant's graduate education goals and preferred fields of history.

The department may grant conditional admission to the program if minimum requirements are not met. Additional work requirements or waivers of general prerequisites for admission shall be set forth by the Instruction Committee at the time of acceptance.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Advisement: The student, with the approval of the department chair, selects an academic adviser who specializes in the student's principal areas of interest.

Graduation Requirements:

1. At least 15 credit hours of coursework at the 600 or 700 level.
2. Master's thesis and defense: The student, in consultation with his or her academic adviser and second reader, prepares and submits a written thesis. Once approved, the student must successfully provide an oral defense. The approved thesis is submitted as three bound copies.
3. An oral defense of the thesis. The student will answer questions from his or her graduate committee on all aspects of the thesis, as well as questions relating to the student's coursework.
4. Demonstrated competence in a foreign language may be required. If applicable, competency examinations will be arranged by the thesis adviser and approved by the department chair.

Program Requirements

Required Courses¹18 cr

Select from the following areas:

- American history
 - European history
 - Third World history
- Up to 6 credit hours may be taken in related disciplines with prior approval of the student's adviser and the department chair

Seminars6 cr

6 credits at the 700 level

Master's Thesis6 cr

HIS 795 Master's Thesis (6)

Total Required Credit Hours30 cr

¹*Selected under advisement*

All courses are 3 credit hours unless otherwise indicated.

HISTORY WITH MUSEUM STUDIES CONCENTRATION

Master of Arts Program

Program Code: MA-NS

Major Code: HIS

HEGIS 2205

History and Social Studies Education Department

David A. Carson, *Chair*

Classroom Building C205, (716) 878-5412

www.buffalostate.edu/history

This program leads to the master of arts degree in history with a concentration in museum studies, and prepares candidates for professional work in museums and historical agencies. The program provides training in a museum setting while refining scholarship and research skills within the discipline of history.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale) in history and 2.75 overall.
2. Two letters of recommendation.
3. A 500-word personal statement describing the applicant's graduate educational goals and interest in the museum field.
4. Demonstrated competence in a foreign language, statistics, or computer programming may be necessary. If applicable, competency examinations will be arranged by the thesis adviser and approved by the department chair.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Graduation Requirements

Master's thesis and defense: The student, in consultation with his or her academic adviser and second reader, prepares and submits a written thesis. Once approved, the student must successfully provide an oral defense. The approved thesis is submitted as three bound copies.

Program Requirements

Required Courses12 cr

HIS 500	American History Seminar
HIS 660	Museums and Society
HIS 665	Critical Issues in Museum Studies
HIS 704	American, European, and Third World History
or	
HIS 709	Local Regional Research Methods

Independent Study or Internship3 cr

Select one option:

HIS 590	Independent Study
HIS 688	Internship

Elective Courses9 cr

Select three courses from the following or other courses under advisement:

AED 505	Foundations in Museum Education Studies
COM 519	Communication for Managers
CRS 559	Principles of Creative Problem Solving
CRS 560	Methods, Theories, and Models of Creative Learning
DES 640	Graduate Studio in Design

Master's Thesis6 cr

HIS 795	Master's Thesis (6)
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Total Required Credit Hours30 cr

All courses are 3 credit hours unless otherwise indicated.

HUMAN RESOURCE DEVELOPMENT

Graduate Certificate Program

Program Code: GRCT-ED

Major Code: HRD

HEGIS 0807

Educational Foundations Department

Warren L. Gleckel, *Interim Chair*

Susan K. Birden, *Program Coordinator and Associate Professor*

Bacon Hall 306, (716) 878-3905

www.buffalostate.edu/adulteducation

This graduate certificate program is designed to serve the advanced educational needs of professionals who educate and train workers and volunteers but do not need a master's degree. The certificate program consists of 12 graduate credit hours, and is designed to address the essential skills and competencies for professional practitioners in human resource development. Graduates will use their skills to develop and administer training programs to produce a more effective and competitive workforce.

The certificate in human resource development can be applied toward a master's degree in adult education at Buffalo State. Students wishing to complete the graduate certificate in human resource development and the master of science in adult education within 30 credit hours must complete the entire graduate certificate and then apply for admission to the master's degree in adult education. This program does not lead to teaching certification.

Online Availability: The graduate certificate in human resource development is offered both on the Buffalo State campus and through computer-based online learning.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.5 (4.0 scale), or a master's degree from an accredited institution with a minimum GPA of 3.0 (4.0 scale).
2. Applicants who hold a bachelor's degree but do not meet either of the above criteria may be admitted if they attain a minimum combined quantitative/verbal score of 1000 on the GRE and a minimum score of 45 on the Miller Analogies Test.
3. A letter describing the applicant's interest.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required Courses12 cr

ADE 610	Methods in Adult Education
ADE 625	Designing and Evaluating Programs for Adult Learners
ADE/BUS 640	Human Resource Development
BUS/EDF/SWK 603	Human Resource Management

Total Required Credit Hours12 cr

All courses are 3 credits unless otherwise indicated.

INDUSTRIAL TECHNOLOGY

Master of Science Program

Program Code: MS-SP

Major Code: IDT

HEGIS 0925

Technology Department

Richard A. Butz, *Chair*

John J. Earshen, *Program Coordinator and Associate Professor*

Upton Hall 314, (716) 878-6018

www.buffalostate.edu/technology

This program prepares professionals for positions of leadership and responsibility in business, industry, and government. It provides direct exposure to actual business and industrial problems in an applications-oriented environment. It encourages part-time study while the participant is involved in full-time employment. Representative undergraduate degrees include industrial technology, engineering technology, computer information systems, and business. Required courses include engineering economics, operations management, integrated industrial systems and research design. These courses provide a common core of knowledge enabling the graduate to effectively function in diverse settings. Elective courses allow the student to pursue topics of interest that may be of immediate professional benefit. A research project, often based on current work experiences, completes the program.

This part-time program is designed to provide a 30-hour degree that blends the management and technology disciplines, and can be completed in three years of part-time study.

Admission Requirements:

1. A bachelor's degree in technology, engineering, business, or information systems from an accredited college or university. Candidates holding other baccalaureate degrees but having significant work experience in one of the previously mentioned disciplines will be considered.

2. A minimum cumulative GPA of 2.5 (4.0 scale) in the baccalaureate degree.

3. Three letters of reference, including one from the applicant's current or most recent employer.

4. Letter of intent. A brief statement describing the applicant's experience and how this degree is expected to help achieve his or her career goals.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Application Procedures:

1. Obtain application materials online at www.buffalostate.edu/graduateschooladmissions or from the Graduate School.

2. Request sealed official transcripts from all higher education institutions attended and submit them with the complete application packet to Graduate School.

3. Obtain approval from the Graduate Studies Committee, the department chair, and the Graduate School.

Admission applications are not complete until all required forms, documents, and data are received.

Program Requirements

Required Courses12 cr

INT/ECO 601	Engineering Economy
INT 602	Operations Management
INT 659	Integrated Industrial Systems
INT 689	Research Design and Methods

Elective Courses¹12-18 cr

Select from the following:

BUS/HIS 536	American Enterprise System
HIS 607	The U.S. in Contemporary World Affairs
INT 610	Managerial Marketing
INT 611	Network Theory
INT 612	Quality Control Management
INT 630	Work Measurement
INT 661	Manufacturing Properties of Materials
INT 662	Manufacturing Case Studies

INT 670	Production and Inventory Management
INT 675	Just-in-Time Manufacturing
PSC 500	Public Administration and Policy

Master's Project, Master's Thesis, or Comprehensive Examination0-6 cr

Select one option:

INT 690	Master's Project
INT 695	Master's Thesis (6)
	Comprehensive Examination (0)

Total Required Credit Hours30 cr

¹*Selected under advisement*

All courses are 3 credit hours unless otherwise indicated.

LITERACY SPECIALIST

Master of Professional Studies Program

Program Code: MPS-ED

Major Code: LTS

Master of Science in Education Program

Program Code: MSED-ED

Major Code: LTB

HEGIS 0830

Elementary Education and Reading Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Accredited by International Reading Association

Wendy A. Paterson, *Chair*

Ellen S. Friedland, *Assistant Chair for Graduate Programs and Associate Professor*

Keli A. Garas-York, *Program Coordinator and Assistant Professor*

Bacon Hall 302, (716) 878-5916

www.buffalostate.edu/elementaryeducation

The Elementary Education and Reading Department offers two programs leading to New York State certification as a literacy specialist: one for the elementary grades and another for middle and secondary grades. Both programs prepare professional literacy specialists to provide instruction for students with reading or writing difficulties. Graduates of these programs also will be able to serve as effective resources and leaders for school-wide literacy curriculum and instruction.

Students should expect to complete the last four required courses (EDU 642, EDU 643 or EDU 645, EDU 647, and EDU 655) in sequence, on a part-time basis, beginning in a fall semester. EDU 647 is offered as a summer course.

Admission Requirements (Both Programs):

1. A bachelor's degree from an accredited college or university.
2. A minimum cumulative GPA of 3.0 (4.0 scale), or a combined quantitative/verbal minimum score of 1000 on the Graduate Record Examination (GRE), or a minimum score of 50 on the Miller Analogies Test (MAT).
3. Submit a copy of a New York State Certificate of Qualification (CQ), Provisional Certificate, or Initial Certificate along with the admission application. Recent graduates or those just completing their undergraduate programs at the time of application, write in the date of the expected certification on the admission application. Submit a copy of certification to the Elementary Education and Reading Department by the time of application for degree candidacy (after completing 6 credits and before the completion of 12 credits).
4. A written statement of professional interests, goals, and relevant professional or personal experience, including the applicant's interest in working with students who are experiencing reading and/or writing difficulties.
5. Three letters of reference that attest to the applicant's potential as a literacy specialist. Forms are available at www.buffalostate.edu/graduateschool/admissions.
6. Demonstrated command of oral and written English.

LITERARY SPECIALIST *continued*

In addition, all applicants should review the Admission to a Graduate Program section in this catalog. Admission to both programs is limited and consequently highly competitive. Admission decisions are based on a combination of candidates' previous academic performance, letters of recommendation, experience working with children, and statement of professional interests.

Degree Candidacy: A student who has completed at least 6 credit hours must submit an Admission to Degree Candidacy form before completing 12 credit hours.

Master of Professional Studies Program (6251)

Graduates of the program earn eligibility for certification as literacy specialists (grades 5–12). Applicants to the 36-credit program must be certified in a secondary subject, art, music, physical education, or other area. Graduate students with elementary, early childhood, or childhood education certification also are eligible for admission.

Program Requirements

Required Courses 27 cr

EDU 513	Survey of Basic Concepts of Elementary Reading Instruction
EDU 606	Literacy Instruction for Linguistically Diverse Students
EDU 609	Improving Reading in Content Areas
EDF 689	Methods and Techniques of Educational Research
EDU 642	Reading Assessment and Evaluation
EDU 645	Teaching Students with Reading Difficulties: Adolescents
EDU 647	Clinical Practicum (6)
EDU 655	Teaching of Reading: Graduate Seminar

Elective Courses¹ 9 cr

Select three courses from the following:

EDU 546	Improvement of Instruction in Language Arts
EDU 584	Literacy Skills and the Adult Learner
EDU 612	Developing Literacy through Literature
EDU 615	Applying Psychology to the Teaching of Reading
ENG 692	Teaching of Writing

Other courses in language arts, young adult literature, linguistics, or other literacy-related areas may be selected under advisement.

Total Required Credit Hours 36 cr

¹Selected under advisement

All courses are 3 credit hours unless otherwise indicated.

Master of Science in Education Program (6261)

Graduates of the program earn eligibility for certification as literacy specialists (birth through grade 6). Applicants to the 36-credit program must be certified in elementary education, early childhood education, or childhood education.

Program Requirements

Required Courses 27 cr

EDU 513	Survey of Basic Concepts of Elementary Reading Instruction
EDU 606	Literacy Instruction for Linguistically Diverse Students
EDU 611	Literacy in the Primary Grades
EDF 689	Methods and Techniques of Educational Research
EDU 642	Reading Assessment and Evaluation
EDU 643	Teaching Students with Reading Difficulties: Childhood
EDU 647	Clinical Practicum (6)
EDU 655	Teaching of Reading: Graduate Seminar

Elective Courses¹ 9 cr

Select three courses from the following:

EDU 535	Teaching Writing in the Elementary School
EDU 546	Improvement of Instruction in Language Arts
EDU 609	Improving Reading in the Content Areas
EDU 612	Developing Literacy through Literature
EDU 615	Applying Psychology to the Teaching of Reading

Other courses in language arts, young adult literature, linguistics, or other literacy-related areas may be selected under advisement.

Total Required Credit Hours 36 cr

¹Selected under advisement

All courses are 3 credit hours unless otherwise indicated.

MATHEMATICS EDUCATION (7-12)

Master of Science in Education Program

Program Code: MSED-NS

Major Code: MTS

HEGIS 1701.01

Mathematics Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

David C. Wilson, *Chair*

Bishop Hall 317, (716) 878-5621

www.buffalostate.edu/mathematics

This program is designed to develop, enhance, and extend the content knowledge and professional competencies of secondary mathematics teachers. Completion of this master of science program does not lead to New York State initial teaching certification. Those interested in receiving initial certification should consider the postbaccalaureate teacher certification program in mathematics education grades 7-12 (7055).

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.5 (4.0 scale) in all undergraduate mathematics courses.
2. Completion of at least 18 credit hours beyond calculus, including one semester of linear algebra or abstract algebra, one semester of geometry, and at least one semester of analysis, discrete mathematics, calculus-based probability, or calculus-based statistics. Those with minor deficiencies may enter the premajor program with written permission from the Mathematics Department chair; a copy of this statement will be filed in the Mathematics Department Office and the Graduate School.
3. Acceptance as a graduate student by the department chair and the Graduate School dean.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

The program is under revision. Contact the Mathematics Department for current requirements.

Program Requirements

Mathematics Courses 12–15 cr

Select from the following:

MAT 501	Mathematics for Teachers Algebra
MAT 521	Mathematics for Teachers Geometry
MAT 581	Mathematics for Teachers Probability and Statistics
MAT 601*	Topics in Modern Algebra
MAT 603	Theory of Matrices
MAT 611*	Topics in Real Analysis
MAT 620	Modern Geometry: Selected Topics
MAT 631	Foundations of Mathematics
MAT 651	Theory of Numbers
MAT 670	Discrete Math and Foundations of Computer Science
MAT 681	Intermediate Probability
MAT 683	Statistical Theory
MAT 696	History of Mathematics
MAT 699	Advanced Special Topics
MAT 701	Modern Algebra I
MAT 711	Analysis I

*Required if not part of student's undergraduate program

Mathematics Education Courses 6–9 cr

Select from the following:

MED 601	Seminar in Teaching of Mathematics
MED 602	Mathematics for the Secondary School Teacher: Special Topics (3-9)
MED 604	Teaching of Geometric Concepts
MED 605	Teaching of Algebraic Concepts
MED 606	Logo: Computer Programming II for Education
MED 607	Technology in Math Education
MED 683	Problem Solving and Problem Posing

Curriculum and Research Courses6 cr

- MED 595 Research Methods and Techniques in Mathematics Education
- MED 600 Contemporary Mathematics Curriculum Development

Master's Project or Master's Thesis.....3-6 cr

Select one option:

- MED 690 Master's Project
- MED 795 Thesis in Mathematics Education (3-6)

Total Required Credit Hours.....30 cr

All courses are 3 credit hours unless otherwise indicated.

MATHEMATICS EDUCATION (7-12)

Postbaccalaureate Teacher Certification Program

Program Code: PBC-NS

Major Code: MTS

HEGIS 1701.01

Mathematics Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

David C. Wilson, *Chair*

Bishop Hall 317, (716) 878-5621

www.buffalostate.edu/mathematics

The mathematics education (7-12) postbaccalaureate teacher certification program leads to eligibility for a New York State initial certificate to teach mathematics in grades 7-12. This program is designed for students who have earned a baccalaureate degree in mathematics from an accredited college or university and intend to complete coursework required for New York State certification to teach mathematics.

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements:

1. A bachelor's degree in mathematics or an applied mathematics field from an accredited college or university with 36 credit hours of mathematics courses and a minimum GPA of 2.5 (4.0 scale) in mathematics courses.

2. Must have passed the New York State certification exams: the Liberal Arts and Sciences Test (LAST) and the Mathematics Content Specialty Test for provisional/initial certification. Contact the Teacher Certification Office, (716) 878-6121, for details.

3. Two years of high school or one year of college-level foreign language.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Requirements may be fulfilled entirely with graduate courses, entirely with undergraduate courses, or with a combination of undergraduate and graduate courses. Graduate-level courses are numbered 500 and higher; undergraduate-level courses are numbered 100-499.

Mathematics Education Courses18-25 cr

Select one course from the following:

- MED 200 Field Experience in Secondary Education Mathematics
- MED 500 Practicum I: Graduate Field Experience in Secondary Mathematics Education

Select one course from the following:

- MED 307 Uses of Technology in the Teaching of Mathematics
- MED 607 Technology in Mathematics Education

Select one option from the following:

- MED 308W Methods in the Teaching of Secondary School Mathematics and Field Experience (1)
- or
- MED 601 Seminar in the Teaching of Mathematics

Select one course from the following:

- MED 383W Learning and Teaching Problem Solving
- MED 683 Problem Solving and Problem Posing

Select one option from the following:

- MED 407 Student Teaching of Mathematics in Junior High/Middle School (6)
- MED 408 Student Teaching of Mathematics in Senior High School (6)
- or
- MED 501 Practicum II: Practice Teaching Mathematics in the Middle School
- MED 502 Practicum III: Practice Teaching Mathematics in the High School

Professional Education Courses13-15 cr

Select one course from the following:

- EDF 303 Educational Psychology
- EDF 503 Educational Psychology

Select one course from the following:

- EDF 403 Historical and Philosophical Forces Influencing Secondary Education
- EDF 525 Philosophy of Education

Select one course from the following:

- EDU 417 Parents, Schools, and Community
- EDU 609 Improving Reading in the Content Areas

Select one course from the following:

- EDU 416 Teaching Literacy in Middle and Secondary Schools
- EDU 513 Survey of Basic Concepts of Elementary Reading Instruction

Select one course from the following:

- EXE 100 Nature and Needs of Individuals with Special Needs
- MED 524 Mathematics Instruction at the Secondary Level (1)

Total Required Credit Hours.....31-40 cr

All courses are 3 credit hours unless otherwise indicated.

MATHEMATICS EDUCATION (7-12; 5-6 EXTENSION)

Postbaccalaureate Teacher Certification Program

Program Code: PBC-NS

Major Code: MTX

HEGIS 1701.01

Mathematics Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

David C. Wilson, *Chair*

Bishop Hall 317, (716) 878-5621

www.buffalostate.edu/mathematics

This program is designed for students who are currently enrolled in the mathematics education 7-12 postbaccalaureate teacher certification program (7055) or who have been approved for candidacy in the mathematics education master's program (6620). It allows them to extend certification in mathematics to grades 5-12.

MATHEMATICS EDUCATION (7-12; 5-6 EXTENSION) *continued*

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements: A New York State Certificate of Qualification (CQ), provisional certificate, or initial certificate to teach mathematics in grades 7–12 or candidacy in the M.S.Ed. in mathematics education program (6620).

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

This program requires 6 additional credit hours of coursework in middle school education. Courses are selected under advisement. Study includes early adolescent development and the application of diverse instructional strategies in middle childhood education, including interdisciplinary teaching and teaming of students and faculty to maximize student learning.

MULTIDISCIPLINARY STUDIES

Master of Arts Program

Program Code: MA-GR

Major Code: MUL

Master of Science Program

Program Code: MS-GR

Major Code: MUL

HEGIS 4999

Kevin Railey, *Associate Provost and Dean, The Graduate School*
Kimberly J. Jackson, *Program Coordinator and Assistant Dean for Strategic and Enrollment Planning, The Graduate School*
Cleveland Hall 204, (716) 878-5601
www.buffalostate.edu/graduateschool/multi

Multidisciplinary studies programs are designed for individuals with unique professional and educational objectives not readily met by traditional master's degree programs. Through advisement and within certain guidelines, students may design their own programs.

There are five program options available: individualized, environmental research and education, human services administration, museum studies, or public relations management.

Admission Requirements (All Options):

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.5 (4.0 scale).
2. A statement of intent as detailed for each option.
3. An interview with the program coordinator. The program coordinator will contact the student for an appointment after the completed application is received.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Prior to admission, applicants must obtain a principal adviser from the graduate faculty, who must sign the Principal Adviser Consent Form. Assistance in selecting a principal adviser may be available during the student's interview.

Upon satisfactory completion of an approved course of study, either a master of arts or a master of science degree is awarded, depending on the scope and content of the program.

Individualized Option

Kimberly J. Jackson, *Program Coordinator and Assistant Dean for Strategic and Enrollment Planning, The Graduate School*
The Graduate School
Cleveland Hall 204, (716) 878-5601

Through advisement and within certain guidelines, this option allows students to design their own programs by selecting graduate courses from any department at the college or from other accredited institutions.

Admission Requirements: See above. In addition, the applicant should include in his or her statement of intent: (a) the professional or educational objectives of a multidisciplinary approach to the master's degree; (b) a brief explanation of the reasons for interest in a nontraditional study format; and (c) a detailed outline of the proposed plan of study, including specific courses.

Environmental Research and Education Option

Alexander Karatayev, *Program Coordinator, Great Lakes Center Director*
Classroom Building C215, (716) 878-4329

This option focuses on study of the environment of the Great Lakes. The primary disciplines include anthropology, biology, chemistry, earth science and earth science education, and geography and planning. Secondary disciplines include creative thinking, economics, and history. The program imparts the broad-based understanding and technical knowledge necessary to deal with complex issues facing the lakes and their contributing watersheds.

Admission Requirements: See above. In addition, the applicant should include:

1. A statement of intent that includes the following: (a) the professional or educational objectives of a multidisciplinary approach to the master's degree; (b) reasons for interest in pursuing the environmental research and education option; and (c) a detailed outline of the proposed plan of study, including specific courses.
2. Three letters of recommendation.
3. Acceptable scores on the Graduate Record Exam (GRE).

Human Services Administration Option

Angelo A. Conorozzo, *Program Coordinator*
Educational Foundations Department
Cleveland Hall 215, (716) 878-4698

This option provides students with the conceptual, technical, and professional tools required for leadership roles in modern human-service agencies. The program is designed for individuals employed in human-service organizations, especially as middle managers.

Admission Requirements: See above. In addition, the applicant should include:

1. A statement of intent that includes the following: (a) the professional or educational objectives; (b) reasons for interest in human services administration option.
2. Two letters of recommendation.

Museum Studies Option

Cynthia Conides, *Program Coordinator and Associate Professor*
History Department
Classroom Building 205, (716) 878-5412

This option provides students with the conceptual and professional tools required for leadership roles in contemporary museums. The program is designed for individuals seeking employment in the evolving world of contemporary museums, and offers students maximum flexibility to design a museum studies program that suits their background, interests, and career plans. Primary disciplines contributing to the program typically include history and social studies education, fine art, design, anthropology, art education, and design. Secondary disciplines might include creative studies, science education, business, economics, communication, art conservation, and educational technology. Students need to meet with the program coordinator to assess their goals and plans, and to create an appropriate course of study.

Admission Requirements: See above. In addition, the applicant should include:

1. A statement of intent that includes educational and professional objectives and reasons for interest in museum studies.
2. Two letters of recommendation.

Public Relations Management Option

Ronald D. Smith, *Program Coordinator and Chair*
Communication Department
Bishop Hall 207, (716) 878-6008

This option is designed for students who hold undergraduate degrees in areas other than public relations, although public relations graduates can be admitted. Those interested in the public relations programs who do not wish to pursue a master's degree in multidisciplinary studies may choose a four-course certificate option. The certificate program will assist those making the transition to public relations management by focusing on formal perspectives of the professional and managerial dimensions of the field.

Admission Requirements: See above. In addition, the applicant should include:

1. A statement of intent, which must include the following information: (a) work experience, if any, relevant to public relations or public communication fields; (b) career goals and how this program will help the applicant achieve them; and (c) a detailed outline of the proposed plan of study, including specific courses, if applying to the master of science degree (if applying only to the certificate program, no list of courses is required).

Program Requirements (All Options)

1. Completion of a minimum of 30 credit hours, comprising at least 15 hours of 600- and 700-level courses, including the master's thesis or master's project.
2. A maximum of 12 credit hours may be taken in a discipline that offers a master's degree. [Exceptions: A maximum of 18 credit hours may be taken in a discipline that offers a master's degree when the student does a master's thesis (6 credits). A maximum of 15 credit hours may be taken in a discipline that offers a master's degree when the student does a master's project (3 credits).]
3. A maximum of 18 credit hours may be taken in a discipline that does not offer a master's degree.
4. A maximum of 15 credit hours may be taken at another accredited institution. This coursework must conform to the limitations stated in 2 and 3 (above) and must have the prior approval of the principal adviser and the program advisory committee.
5. Only grades of B or better will be accepted as transfer credit. An official transcript showing transfer credit must be submitted to the Graduate School.
6. Coursework (including transfer credit) must be completed within the six-year period immediately preceding the date of completion of the program.
7. A maximum of 6 credit hours of independent study may be included in the program.
8. Students must maintain a minimum cumulative GPA of 3.0 (4.0 scale).
9. Master of arts candidates must complete a thesis and must orally defend it to the satisfaction of the principal adviser and the advisory committee. Master of science candidates must complete either a thesis or a supervised project and also must successfully defend it in an oral examination by the principal adviser and the advisory committee.
10. An application for admission to candidacy, approved by the student's principal adviser and members of the advisory committee, must be submitted to the Graduate School before the completion of 12 credit hours at Buffalo State.

Advisement (All Options)

Each student must convene an academic advisory committee for his or her program consisting of a principal adviser (PA) and two additional graduate advisers. (Human services administration and public relations management options have assigned PAs; see the option coordinator for details.) It is the student's responsibility to initiate and maintain contact with the advisory committee.

The PA works closely with the student throughout his or her course of study and usually supervises the student's thesis or project. The PA works with the student to select two graduate faculty members to serve on his or her program advisory committee.

The advisory committee approves the student's plan of study (candidacy application) and the thesis or project, and attests to the student's successful completion of the approved program. At least two of the college's four schools (arts and humanities, education, natural and social sciences, and professions) must be represented on the committee. One committee member from outside the college (a member of a graduate faculty at another institution) may be recommended but must meet the approval of the corresponding Buffalo State department and the dean of the Graduate School. A copy of the non-Buffalo State faculty member's curriculum vitae must accompany the candidacy application. All committee memberships must be approved by the dean of the Graduate School.

MUSEUM STUDIES

Graduate Certificate Program

Program Code: GRCT-NS

Major Code: MST

HEGIS 1099

History and Social Studies Education Department

David A. Carson, *Chair*

Classroom Building C205, (716) 878-5412

www.buffalostate.edu/history

The museum studies certificate is a flexible program designed to allow students to tailor a program to their background and primary work experience. Each student is assigned an academic adviser who works closely with the student to create an appropriate program. The certificate in museum studies can be applied toward a master's degree program at Buffalo State in art education (K–12), history, social studies education (7–12), creative studies, or applied economics. Students interested in combining the museum studies certificate with a degree program are advised to first discuss this option with an adviser from the corresponding degree program.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.75 (4.0 scale).
2. Two letters of recommendation.
3. A 500-word personal statement describing the applicant's graduate education goals and interest in the museum field.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

MUSEUM STUDIES *continued*

Program Requirements

Required Courses.....6 cr

HIS 660	Museums and Society
HIS 665	Critical Issues in Museum Studies

Elective Courses¹.....12 cr

AED 505	Foundations in Museum Education Studies
COM 519	Communication for Leaders and Managers
CRS 559	Principles of Creative Problem Solving
or	
CRS 560	Methods, Theories, and Models of Creative Learning
DES 640	Graduate Studio in Design
ECO 508	Applied Macroeconomic Theory
HIS 500	Studies in American History
HIS 590	Independent Study
HIS 620	Exceptional Hispanic Individuals: Historic and Cultural Concerns
HIS 623	Problems in U.S. History Since
HIS 688	Museum Internship (with approval of adviser)
HIS 709	Local History: Research Methods and Techniques
Or other course(s) under advisement	

Total Required Credit Hours.....18 cr

¹Selected under advisement

All courses are 3 credit hours unless otherwise indicated.

PHYSICS EDUCATION (7-12)

Master of Science in Education Program

Program Code: MSED-NS

Major Code: PHS

HEGIS 1902.01

Physics Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Michael DeMarco, *Chair*

Science Building 262, (716) 878-5004

Dan L. MacIsaac, *Director of Graduate Programs and Associate Professor*

Science Building 222, (716) 878-3802

www.buffalostate.edu/physics

The master of science in physics education is designed for teachers who wish to combine advanced work in physics with graduate work in education.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.5 (4.0 scale).
2. A New York State Certificate of Qualification (CQ), provisional certificate, or professional or initial certificate in a secondary science or mathematics.
3. An application packet, including a personal statement and three letters of reference.
4. An interview may be required.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Physics Teaching Methods.....6 cr

PHY 510	Process Skills in Physics Teaching (6)
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Physics Content with Model Pedagogy.....12 cr

PHY 620	Powerful Ideas and Quantitative Modeling: Force, Motion, and Energy (6)
PHY 622	Powerful Ideas and Quantitative Modeling: Electricity and Magnetism (6)

Elective Courses.....9 cr

Select three courses from the following:

PHY 518	Wave Phenomena and Optics
PHY 520	Modern Physics
PHY 525	Nuclear and Particle Physics
SCI 527	Current Topics in Science
SCI 632	Curriculum Trends in Science Teaching in the Secondary School
SCI 664	Teaching Science with Media
SCI 685	Evaluation in Science Education

Seminar.....3 cr

PHY 500	Physics Education Research Seminar
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Master's Project.....3 cr

PHY 690	Master's Project
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Total Required Credit Hours.....33 cr

All courses are 3 credit hours unless otherwise indicated.

PHYSICS EDUCATION (7-12)

Master of Science in Education with Alternative Certification Program

Program Code: MSED-NS

Major Code: PHA

HEGIS 1902.01

Physics Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Michael DeMarco, *Chair*

Science Building 262, (716) 878-5004

Dan L. MacIsaac, *Director of Graduate Programs and Associate Professor*

Science Building 222, (716) 878-3802

www.buffalostate.edu/physics

This master of science in physics education is designed for individuals who did not attain certification as part of their undergraduate curriculum. After completion of 200 clock hours of instruction, including 40 hours of field study, candidates may qualify for a NYSED transitional B certificate allowing them to teach in New York State.

Admission Requirements:

1. A bachelor's degree in physics or a related area from an accredited four-year institution with a minimum cumulative undergraduate GPA of 3.0 (4.0 scale) or approval of the department chair.
2. A minimum of 18 credit hours (total) in two sciences other than physics (may be completed during the program if not completed by the time of admission).
3. One year of college study or two years of high school study of a language other than English (may be completed during the program if not completed by the time of admission).
4. Passing scores on two New York State examinations: the Liberal Arts and Sciences Test (LAST) and the Physics Content Specialty Test (CST). (These exams may be taken after admission to the program but must be passed before a teaching position is accepted).
5. A written personal statement.
6. Three letters of reference.
7. An interview may be required.

(Note: These admission requirements are mandated in the Transitional B certification regulations.)

Program Requirements

Exceptional Education and Educational Foundations.....6 cr

EDF 529	Adolescent Psychology
Select one course from the following:	
EXE 500	Individuals with Special Needs
EXE 577	Teaching Individuals with Exceptionalities in the Regular Classroom

Literacy	6 cr
EDU 417 Adolescent Literacy	
<i>Select one course from the following:</i>	
EDU 416 Teaching Literacy in Middle and Secondary Schools	
EDU 609 Improving Reading in the Content Areas	
Physics Teaching Methods	6 cr
PHY 510 Process Skills in Physics Teaching (6)	
Physics Content with Model Pedagogy	12 cr
PHY 620 Powerful Ideas and Quantitative Modeling: Force, Motion, and Energy (6)	
PHY 622 Powerful Ideas and Quantitative Modeling: Electricity and Magnetism (6)	
Electives	6 cr
PHY 518 Wave Phenomena and Optics	
PHY 520 Modern Physics	
PHY 525 Nuclear and Particle Physics	
PHY 616 Advanced Dynamics	
PHY 618 Advanced Electricity and Magnetism I	
SCI 527 Current Topics in Science	
SCI 632 Curricular Trends in Science Teaching in the Secondary School	
SCI 664 Teaching Science with Media	
SCI 685 Evaluation in Science Education	
Or other courses by advisement.	
Seminar	3 cr
PHY 500 Physics Education Research Seminar	
Mentored Physics Teaching	3 cr
PHY 502 Initial Teaching Experience for Alternative Certification	
Master's Project	3 cr
PHY 690 Master's Project	
Other science courses	18 cr
18 credits spread over two other sciences. These may be undergraduate courses.	
Total required Credit Hours	45 cr
All courses are 3 credit hours unless otherwise indicated.	

SOCIAL STUDIES EDUCATION (7-12)

Master of Science in Education Program

Program Code: MSED-NS

Major Code: SSS

HEGIS 2201.01

History and Social Studies Education Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

David A. Carson, *Chair*

Classroom Building C205, (716) 878-5412

www.buffalostate.edu/history

The master of science in social studies education (7-12) program helps candidates become educational leaders and innovative change agents as they acquire eligibility for permanent/professional teaching certification for grades 7-12.

The program is based on a model that gives equal weight to pedagogy and content matter. Fifteen credit hours of social studies education/pedagogy and 15 credit hours of history/social sciences are required for the M.S. in education degree. The social studies education/pedagogy portion of the program consists of courses in social studies curriculum, social studies methods, theory, and research methods to address the curricular concerns of the National Council for the Social Studies. The history/social science portion is divided into 9 credit hours of concentration and 6 credit hours of electives. Furthermore, the program links pedagogy and the content area by requiring two block courses (6 credit hours each) so students concurrently take a history and related pedagogy course in the same semester.

At the completion of 12 credit hours of coursework in the program, the student must have achieved a minimum GPA of 3.0 (4.0 scale). Prior to the completion of 12 credit hours, the student must file an application for candidacy, which is a written contract specifying the courses to be completed in the master's program. Advisement: Each student is assigned an academic adviser. It is imperative that students regularly consult with their advisers. All students must have their programs of study approved by their advisers and the department chair.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.75 (4.0 scale).
2. A New York State Certificate of Qualification (CQ), provisional certificate, or initial certificate to teach social studies.
3. 36 credit hours in history and/or the social sciences.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Graduation Requirements: (a) Successful completion of a master's thesis (SSE 795), or (b) a comprehensive examination, or (c) defense of a graduate portfolio.

Program Requirements

At least 15 credit hours must be from 600- or 700-level courses.

Required Courses¹

15 cr
History and/or social science courses; 9 or more credit hours must be concentrated in a single discipline.

Professional Education Courses

SSE 502*	Teaching Social Studies
SSE 513	Seminar in Secondary Social Studies Education
SSE 655*	Social Studies Laboratory
SSE 689	Research Methods and Techniques in Secondary Social Studies
SSE XXX	Social Studies Education Elective

*Must be taken concurrently with one History content course

Master's Thesis, Portfolio Defense, or Comprehensive Examination.....

<i>Select one option:</i>	
SSE 795	Master's Thesis (3-6)
	Defense of Graduate Portfolio (0)
	Comprehensive Examination (0)

Total Required Credit Hours

30-36 cr
¹*Selected under advisement*
All courses are 3 credit hours unless otherwise indicated.

SOCIAL STUDIES EDUCATION (7-12)

Postbaccalaureate Teacher Certification Program

Program Code: PBC-NS

Major Code: SSS

HEGIS 2201.01

History and Social Studies Education Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

David A. Carson, *Chair*

Classroom Building C205, (716) 878-5412

www.buffalostate.edu/history

The social studies education (7-12) postbaccalaureate teacher certification program leads to eligibility for a New York State initial certificate to teach social studies in grades 7-12. This program is designed for students who have earned a baccalaureate degree from an accredited college or university in history or social science, or another discipline with a 36-credit concentration in history and/or social science courses, and who intend to complete the coursework required for New York State certification to teach social studies in secondary or middle schools.

SOCIAL STUDIES EDUCATION (7-12) *continued*

The program supplies the background knowledge necessary for teachers to implement the New York State learning standards for social studies in grades 7–12. It also meets the standards set by national professional organizations, such as the National Council for the Social Studies and the National Council for the Accreditation of Teacher Education.

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

To student teach, a student must have a minimum cumulative GPA of 2.75 in the program, as well as maintain grades of C or higher in SSE 303 and SSE 309.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.75 (4.0 scale) in all history and social science courses and overall.
2. 36 credit hours in history and/or the social sciences.
3. Acceptable evaluations on the PRAXIS II exam in social studies content. Students with deficient scores must take coursework to remedy areas of deficiency.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Content Area Courses or equivalents39-50 cr

A. Basic U.S. History Courses

HIS 106	American Life I
HIS 107	American Life II
HIS 415	History and Government of New York State

B. Basic World History Courses

Select two courses from the following:

HIS 115	Foundations of Western Civilization
HIS 116	Europe Since 1500
HIS 117	Twentieth Century Europe

HIS 230	World Civilizations
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C. Other World History Courses

Any two Asian, Middle Eastern, African, or Latin American history courses

D. Geography Courses

GEG 300	World Regional Geography
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Select from the following: GEG 102, 206, 308, 320, 360, 362, 364

E. Political Science Course

Select one course from the following:

PSC 102	Introduction to American Government
PSC 220	Development of American Constitutional Law
PSC 320	U.S. Constitution/Civil Liberties

F. Economics Course

Select one course from the following:

ECO 101	The Economic System
ECO 201	Principles of Macroeconomics
ECO 202	Principles of Microeconomics

G. Cultural Diversity Course

SSE 363	American Identity in Transition: Diversity and Pluralism in the United States
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H. Elective Courses¹ (0-11 cr)

History and/or social science courses

Foreign Language Courses6 cr
One year or equivalent

Professional Education Courses30 cr

EDF 303	Educational Psychology
EDU 416	Teaching Reading in Middle and Secondary Schools
ENG 309	Teaching and Evaluating Writing
PSY 357	Adolescent and Young Adult Development
SSE 200	Introduction to Secondary Teaching
SSE 303	Methods and Materials in Teaching Middle School Social Studies
SSE 309	Methods and Materials in Teaching High School Social Studies
SSE 370	Computer Technology in the Social Studies Classroom

Select one course from the following:

EXE 100	Nature and Needs of Individuals with Special Needs
EXE 372	Foundations of Teaching Secondary Students with Disabilities

Select one course from the following:

SSE 402	Historical and Philosophical Foundations of Social Education
SSE 407	The Teaching of History

Student Teaching Courses12 cr

SSE 409	Student Teaching of Social Studies in the Middle School (6)
SSE 410	Student Teaching of Social Studies in Senior High School (6)

Total Required Credit Hours92 cr

¹Selected under advisement

All courses are 3 credit hours unless otherwise indicated.

SOCIAL STUDIES EDUCATION (7-12; 5-6 EXTENSION)

Postbaccalaureate Teacher Certification Program

Program Code: PBC-NS

Major Code: SSX

HEGIS 2201.01

History and Social Studies Education Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

David A. Carson, *Chair*

Classroom Building C205, (716) 878-5412

www.buffalostate.edu/history

The social studies education (7–12 with 5–6 extension) postbaccalaureate teacher certification program leads to eligibility for a New York State initial certificate to teach social studies in grades 5–12. This program is designed for students who have earned a baccalaureate degree in history, a social science, or another discipline with a 36-credit concentration in history and/or social science courses from an accredited college or university and who intend to complete the coursework required for New York State certification to teach social studies in secondary or middle schools.

The program supplies the background knowledge necessary for teachers to implement the New York State learning standards for social studies in grades 5–12. It also meets the standards set by national professional organizations, such as the National Council for the Social Studies and the National Council for the Accreditation of Teacher Education.

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

To student teach, a student must have a minimum cumulative GPA of 2.75 in the program, as well as maintain grades of C or higher in SSE 303 and SSE 309.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.75 (4.0 scale) in all history and social science courses and overall.

2. 36 credit hours in history and/or the social sciences.
3. Acceptable evaluations on the PRAXIS II exam in social studies content. Students with deficient scores must take coursework to remedy areas of deficiency.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Content Area Courses39–50 cr
Or equivalents:

A. History of the Western Hemisphere Courses

HIS 106	American Life I
HIS 107	American Life II
HIS 308	History of Canada
or	
HIS 316	Modern Canada
HIS 314	Modern Latin America
HIS 415	History and Government of New York State

B. History of the Eastern Hemisphere Courses

Select two courses from the following:

HIS 115	Foundations of Western Civilization
HIS 116	Europe Since 1500
HIS 117	Twentieth Century Europe
HIS 230	World Civilizations

C. Geography Courses (by advisement)

GEG 300	World Regional Geography
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Select from the following: GEG 102, 206, 309, 320, 360, 362, 364

D. Political Science Course

Select one course from the following:

PSC 102	Introduction to American Government
PSC 220	Development of American Constitutional Law
PSC 320	U.S. Constitution/Civil Liberties

E. Economics Course

Select one course from the following:

ECO 101	The Economic System
ECO 201	Principles of Macroeconomics
ECO 202	Principles of Microeconomics

F. Cultural Diversity Course

SSE 363	American Identity in Transition: Diversity and Pluralism in the United States
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G. Elective Courses¹ (0-11 cr)

History and/or social science courses
Foreign Language Courses (6 cr)
One year or equivalent

Professional Education Courses30 cr

EDF 303	Educational Psychology
EDU 416	Teaching Reading in Middle and Secondary Schools
ENG 309	Teaching and Evaluating Writing
PSY 357	Adolescent and Young Adult Development
SSE 200	Introduction to Secondary Teaching
SSE 303	Methods and Materials in Teaching Middle School Social Studies
SSE 309	Methods and Materials in Teaching High School Social Studies
SSE 370	Computer Technology in the Social Studies Classroom

Select one course from the following:

EXE 100	Nature and Needs of Individuals with Special Needs
EXE 372	Foundations of Teaching Secondary Students with Disabilities

Select one course from the following:

SSE 402	Historical and Philosophical Foundations of Social Education
SSE 407	The Teaching of History

Student Teaching Courses15 cr

SSE 409	Student Teaching of Social Studies in the Middle School (6)
SSE 410	Student Teaching of Social Studies in Senior High School (6)
SSE 488	Internship: Middle Childhood and Adolescence Education

Total Required Credit Hours95 cr

¹Selected under advisement

All courses are 3 credit hours unless otherwise indicated.

SPANISH EDUCATION (7–12)

Postbaccalaureate Teacher Certification Program

Program Code: PBC-AH

Major Code: SPS

HEGIS 1105.01

Modern and Classical Languages Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Deborah L. Hovland, *Chair*

Mark K. Warford, *Program Coordinator and Associate Professor*

Bishop Hall 122, (716) 878-5414

www.buffalostate.edu/languages

The Spanish education (7–12) postbaccalaureate teacher certification program leads to eligibility for a New York State initial certificate to teach Spanish in grades 7–12. This program is designed for students who have earned a baccalaureate degree in Spanish or a related field from an accredited college or university and intend to complete the coursework required for New York State certification to teach Spanish in secondary or middle schools.

The program provides the background necessary for teachers to implement the New York State learning standards for Languages Other Than English (LOTE) 7–12. It also meets the standards set by national professional organizations, such as the American Council of Teachers of Foreign Languages and the National Council for Accreditation of Teacher Education.

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

It takes approximately three to four semesters to complete certification requirements at Buffalo State College.

Students are responsible for any additional certification requirements, including the Liberal Arts and Sciences Test (LAST), the Assessment of Teaching Skills written test for provisional/initial certification, and child abuse certification.

To student teach, a student must have achieved a minimum GPA of 2.75 in Spanish coursework and overall, and must have earned a minimum grade of C in FLE 405 and FLE 406. Also, the student must complete an ACTFL-Approved Oral Proficiency Interview (OPI) in order to demonstrate Advanced-Low Proficiency in Spanish. If Advanced-Low Proficiency is not achieved, an additional upper-level Spanish course, chosen in consultation with the student's advisor, must be successfully completed.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.75 (4.0 scale) and a major in Spanish language, literature, and culture (or a related discipline with a minimum of 36 credit hours in Spanish).*

2. A minimum GPA of 2.75 in Spanish coursework and overall.

3. Successful completion of two written essays (one in English, one in Spanish) administered by the department as part of the interview process.

4. A personal interview with the program coordinator, department chair, or other designated official.

*Applicants who do not meet these admission requirements may take courses at Buffalo State to become eligible to apply to the program.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

SPANISH EDUCATION (7-12) *continued*

Program Requirements

Required Spanish Courses¹6 cr

Select two courses from the following:

SPA 303	Introduction to Spanish Literature
SPA 305	Spanish Phonetics
SPA 306	The Civilization of Spain
SPA 307	Survey of Spanish Literature
SPA 308	Survey of Spanish Literature
SPA 309	The Civilization of Latin America
SPA 310	Survey of Spanish American Literature
SPA 311	Survey of Spanish American Literature
SPA 405	Old Spanish
SPA 415	Advanced Grammar and Composition
SPA 416	Advanced Conversation
SPA 495	Special Project
SPA 496	Seminar ¹

Professional Education Courses24 cr

EDF 303	Educational Psychology
EDF 403	Historical and Philosophical Foundations of Secondary Education
EDU 416	Teaching Reading in Secondary Schools
EXE 372	Foundations of Teaching Secondary Students with Disabilities
FLE 200	Field Experience in Foreign Language Education
FLE 316	Teaching Reading in a Foreign Language in Middle School
FLE 405	Methods and Materials for Teaching Foreign Languages in the Secondary Schools
FLE 406	Techniques for Teaching and Evaluating Foreign Languages in Middle and Secondary Schools

Student Teaching Courses12 cr

FLE 407	Student Teaching of Foreign Languages in the Middle/Junior High School (6)
FLE 408	Student Teaching of Foreign Languages in the High School (6)

Total Required Credit Hours42 cr

¹ *Selected under advisement*

All courses are 3 credit hours unless otherwise indicated.

SPECIAL EDUCATION: EARLY CHILDHOOD

SPECIAL EDUCATION: CHILDHOOD

SPECIAL EDUCATION: ADOLESCENCE

TEACHING BILINGUAL EXCEPTIONAL INDIVIDUALS

Master of Science in Education Programs

Special Education: Early Childhood Program Code:

MSED-Ed

Major Code: EXC

Special Education: Childhood Program Code: MSED-ED

Major Code: XCE

Special Education: Adolescence Program Code:

MSED-ED

Major Code: EXA

Teaching Bilingual Exceptional Individuals Program

Code: MSE-ED

Major Code: BXE

HEGIS 0808

Exceptional Education Department

National Council for Accreditation of Teacher Accreditation (NCATE) Accredited

Kerin Miller, *Interim Chair and Bilingual Program Coordinator*

Ketchum Hall 201, (716) 878-5317

General Information (voice mail): (716) 878-5317

www.buffalostate.edu/exceptionaleducation

The special education and teaching bilingual exceptional individuals programs lead to a master of science in education degree and eligibility for New York State certification in special education. These graduate programs are designed for students with undergraduate majors in education or special education.

The Exceptional Education Department offers three specialty programs in special education: early childhood, childhood, and adolescence. Students who are not provisionally/initially certified in special education must complete 15–18 credit hours of preliminary coursework in addition to the program area requirements. Required preliminary courses are listed under each program area below. All four programs require the completion of a research component: EXE 684 and EXE 690, which must be taken in sequential order at the end of the program.*

Advisement: Because of the variety of options available in the department, it is imperative that majors and premajors seek advisement as early as possible. Students should contact their assigned academic advisers. The student designs programs of study with his or her adviser according to the student's goals and background.

Practicum: Practicum assignments link theoretical coursework with the applied demands of a wide variety of internship settings. Practicum sites are available to meet the needs and interests of nearly all students and are selected by the program coordinator.

Certification: Students in the department who are certified in early childhood education, childhood education, or adolescent education must fulfill course and degree requirements for New York State certification in special education and/or teaching bilingual exceptional education.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.5 (4.0 scale). Admission is competitive; not all qualified applicants are admitted.
 2. Certification in early childhood special education, childhood special education, or adolescence special education. Applicants with certification in early childhood education, childhood education, or adolescence education must meet additional special education certification requirements once enrolled.
 3. Employment or other experience relevant to the graduate course of study.
 4. A written statement describing the applicant's philosophy of education and relevant experiences in the field. This statement must adhere to standard written English.
 5. Faculty review.
 6. Completion of a special application (available from the department or download from www.buffalostate.edu/graduateschool/admissions).
 7. The ability to speak English and Spanish, and an oral interview (for teaching bilingual exceptional individuals program applicants only).
- In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Successful completion of the undergraduate program in exceptional education at Buffalo State is not a guarantee of admission to a graduate program. A point system based on the above criteria is used to evaluate applicants. Applicants with the highest point totals are admitted to the program each admission period. Only students admitted to the major (as majors or premajors) may take courses other than EXE 500.

Premajor Status: Students may not apply for premajor status. They apply to the graduate program, and the department decides if they are accepted to the program as majors or premajors. Premajors may enroll, by advisement, in two EXE courses at the 500 level (e.g., EXE 500, EXE 501) only. Premajors may not register for courses identified as "majors only" during the preregistration period. Student teaching and other fieldwork experiences are closed to premajors. There is no waiting list for admission to the Exceptional Education Department. Premajors apply for admission as majors by submitting a change of major form to the Graduate School during or after the completion of two EXE courses. Premajors are not guaranteed admission to the program.

Special Education: Early Childhood Program (6340)

This program prepares early interventionists and teachers to work with infants and young children with disabilities—or young children at risk for becoming disabled—and their families. The program is cross-categorical; prospective teachers receive coursework related to working with students with physical, intellectual, sensory, communication, and/or behavioral disabilities.

The role of the early interventionist or preschool teacher is to facilitate the child's development of social, motor, communication, self-help, cognitive, and behavioral skills. Interventionists are expected to design activities and environments to enhance the child's concept of self, sense of competence and control, and independence. Because a number of educational programs serving this population subscribe to an interdisciplinary approach, much of the assessment, planning, and implementation of programs is done in collaboration with other members of the professional team.

*Admission to EXE 684 is by special permission. An application is completed the semester prior to admission. See the department office for application deadlines.

Preliminary Courses.....15 cr

Required for students without provisional/initial certification in special education

EXE 500	Individuals with Special Needs
EXE 501	Educational Assessment Techniques for Special Education
EXE 502	Contingency Management
EXE 504	Graduate Practicum in Special Education (6)

Required Courses24 cr

EXE 510	Strategies for Cognition and Emergent Literacy in Young Children with Disabilities
EXE 612	Managing the Behavior of Young Children with Disabilities
EXE 620	Curriculum for Individuals with Moderate and Severe Disabilities
EXE 628	Collaboration and Consultative Practices in Inclusive Settings
EXE 650	Assessment of Young Children with Disabilities
EXE 652	Intervention for Young Children with Disabilities
EXE 682	Instructional Field Experience in Special Education
EXE 684	Graduate Seminar in Exceptional Education

Elective Courses¹6 cr

Select two courses from the following:

EXE 518	Individuals with Physical Disabilities
EXE 530	Parent and Family Involvement in Special Education Programs
EXE 534	Understanding Students with Behavior Problems in the Classroom
EXE 544	Models of Classroom Discipline for Students with Disabilities
EXE 631	Adapting Language Arts and Reading Instruction for Students with Mild Disabilities
EXE 632	Direct Instruction Intervention Models for Students with Special Needs
SLP 540	Childhood Language Disabilities

Master's Project or Master's Thesis3-6 cr

Select one option:

EXE 690	Master's Project
EXE 695	Master's Thesis (6)

Total Required Credit Hours33-51 cr

¹Selected under advisement

All courses are 3 credit hours unless otherwise indicated.

Special Education: Childhood Program (6341)

This program prepares teachers for delivery of educational services in classrooms with typical students. It prepares special education teachers to work closely with general educators in a consultative or collaborative role to help infuse special education practices into the general education class. The coursework is designed to familiarize teachers with curricular expectations and content in general education. It also prepares teachers to make appropriate modifications to the curriculum for students with mild disabilities in general educational settings.

The goal of this program is to prepare special educators, working closely with general educators, to provide the best teaching strategies to promote student learning, as well as to design positive environments that foster learning for students both with and without disabilities.

Preliminary Courses.....18 cr

Required for students without provisional/initial certification in special education

EXE 500	Individuals with Special Needs
EXE 501	Educational Assessment Techniques for Special Education
EXE 502	Contingency Management
EXE 503	Instructional Strategies (Foundations)
EXE 504	Graduate Practicum in Special Education (6)

Required Courses.....24 cr

EXE 620	Curriculum for Individuals with Moderate and Severe Disabilities
EXE 628	Collaboration and Consultative Practices in Inclusive Settings
EXE 631	Adapting Language Arts and Reading for Students with Mild Disabilities
EXE 632	Direct Instruction Intervention Models for Students with Special Needs
EXE 633	Adapting Content Area Instruction for Children and Adolescents with Disabilities
EXE 634	Applied Behavior Analysis
EXE 636	Promoting Effective Social Interaction in the Schools
EXE 684	Graduate Seminar in Exceptional Education

SPECIAL EDUCATION: CHILDOOD *continued*

Elective Courses¹3 cr

Select one course from the following:

EXE 518	Individuals with Physical Disabilities
EXE 530	Parent and Family Involvement in Special Education Programs
EXE 534	Understanding Students with Behavior Problems in the Classroom
EXE 544	Models of Classroom Discipline for Students with Disabilities
EXE 627	Transition from School to Adult Community Life
EXE 644	Advanced Behavior Analysis for Challenging Behaviors
EXE 650	Assessment of Young Children with Disabilities
EXE 652	Intervention for Young Children with Disabilities
EXE 682	Instructional Field Experience in Special Education

Master's Project or Master's Thesis3-6 cr

Select one option:

EXE 690	Master's Project
EXE 695	Master's Thesis (6)

Total Required Credit Hours30-51 cr

¹Selected under advisement

All courses are 3 credit hours unless otherwise indicated.

Special Education: Adolescence Program (6342)

This program prepares teachers to work with students with mild disabilities at the secondary level. It is intended to develop multifaceted teachers who possess a number of key competencies. Secondary special educators are prepared to work collaboratively with general education subject matter specialists, as well as with career education personnel. Graduates of this program become knowledgeable in subject matter content, as well as career and vocational education. They also acquire a solid base in the technology of teaching, with knowledge related to direct and interactive instruction (cooperative learning and peer tutoring).

The adolescence program recognizes the unique needs of adolescents with learning problems. Many students who continue to experience learning difficulties at the secondary level (due to the lack of appropriate instruction or services) may become frustrated and drop out of school. Others who continue in the educational system until they reach age 21 and are no longer eligible to receive services are unprepared to enter the community as independent, participating members of the workforce or community. A major goal of this program is to prepare teachers to address students' skill deficits, social adaptation problems, and vocational competence.

Preliminary Courses 18 cr

Required for students without provisional/initial certification in special education

EXE 500	Individuals with Special Needs
EXE 501	Educational Assessment Techniques for Special Education
EXE 502	Contingency Management
EXE 503	Instructional Strategies (Foundations)
EXE 504	Graduate Practicum in Special Education (6)

Required Courses27 cr

EDF 500	Multicultural Education
EXE 530	Parent and Family Involvement in Special Education Programs
EXE 544	Models of Classroom Discipline for Students with Disabilities
EXE 627	Transition from School to Adult Community Life
EXE 628	Collaboration and Consultative Practices in Inclusive Settings
EXE 632	Direct Instruction Intervention Models for Students with Special Needs
EXE 682	Instructional Field Experience in Special Education
EXE 684	Graduate Seminar in Exceptional Education
CTE 605	Vocational Guidance for Career Exploration

Elective Courses¹3 cr

Select one course from the following:

EXE 518	Individuals with Physical Disabilities
EXE 534	Understanding Students with Behavior Problems in the Classroom
EXE 620	Curriculum for Individuals with Moderate and Severe Disabilities
EXE 631	Adapting Language Arts and Reading Instruction for Students with Mild Disabilities
EXE 634	Applied Behavior Analysis
EXE 636	Promoting Effective Social Interaction in the Schools
EXE 644	Advanced Behavior Analysis for Challenging Behaviors

Master's Project or Master's Thesis3-6 cr

Select one option:

EXE 690	Master's Project
EXE 695	Master's Thesis (6)

Total Required Credit Hours33-54 cr

¹Selected under advisement

All courses are 3 credit hours unless otherwise indicated.

Teaching Bilingual Exceptional Individuals (6326)

Graduates of this program receive a master of science in education degree and are recommended for New York State certification in special education and bilingual education. Job opportunities are available for a full range of services to individuals with disabilities. Graduates will be eligible for placements in inclusion settings, resource rooms, self-contained classrooms, and residential services. State certification allows graduates to work with individuals with mild disabilities, from early childhood to adult, in both monolingual and bilingual (Spanish-English) settings.

All courses must be planned with an academic adviser and approved by the department chair.

Admission Requirements:

1. Current enrollment in one of the special education master's programs (i.e., early childhood, childhood, or adolescence), or
2. Current enrollment in the speech-language pathology master's program, or
3. A master's degree in special education.

Required Courses18 cr

BXE 623	Policies and Practices of Bilingual Education and Bilingual Special Education
BXE 625	Curriculum I: Strategies for Culturally and Linguistically Diverse Exceptional Students
BXE 626	Assessment Techniques in Bilingual Special Education
BXE 627	Curriculum II: Applied Strategies in Bilingual Education
BXE 628	Bilingual Special Education Field Practicum
EXE 684	Graduate Seminar in Exceptional Education

Total Required Credit Hours18 cr

All courses are 3 credit hours unless otherwise indicated.

Doctor of Philosophy Degree in Special Education

The Buffalo State College Exceptional Education Department and the University at Buffalo Learning and Instruction Department have developed a doctor of philosophy degree in special education. Students interested in more information about this program should contact Sharon Raimondi, Ph.D., (716) 645-2455, ext. 1143.

SPEECH-LANGUAGE PATHOLOGY

Master of Science in Education Program

Program Code: MSED-SP

Major Code: SLP

HEGIS 1220

Speech-Language Pathology Department

Accredited by the Council on Academic Accreditation (CAA)

of the American Speech-Language-Hearing Association

National Council for Accreditation of Teacher Education (NCATE) Accredited

Constance Dean Qualls, *Chair*

Ketchum Hall 209, (716) 878-5502

www.buffalostate.edu/speech

Programs must be planned under advisement and approved by the director of graduate studies and the department chair. Students are expected to complete academic and clinical education requirements to qualify for the Certificate of Clinical Competence (CCC) in speech-language pathology issued by the American Speech-Language-Hearing Association (ASHA) and New York State licensure in speech-language pathology. Additional coursework may be required for teacher certification. Students must complete a minimum of three semesters of supervised practica in the Speech-Language-Hearing Clinic prior to placement at off-campus practica. Only students in good standing are permitted to enroll in SLP 505 Graduate Practicum in an Educational Setting and SLP 611 Externship in Communication Disorders. Students must meet with their academic adviser before initial registration to plan a program that will ensure completion of ASHA certification, New York State licensure, and New York State teacher certification requirements.

The speech-language pathology program is accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association and is registered with the State Education Department for licensure in speech-language pathology and for the initial/professional teaching certificate (Teacher of the Speech and Hearing Handicapped).

Curriculum is currently under revision. Contact Department Chair for details.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale).
 2. A minimum of 22 credit hours of undergraduate coursework in speech-language pathology that includes courses related to the normal development of speech, language, and hearing processes; courses related to disordered speech, language, and hearing; and courses related to the speech and hearing sciences. For ASHA and NCATE certification, the following courses are also required. If they were not taken at the undergraduate level, they will be added to the graduate program:
 - 3 credits in a biological science
 - 3 credits in the physical sciences
 - 3 credits in math (can be MAT 311)
 - 3 credits in the social and behavioral sciences
 - EDF 202 Child Development and Education
 - EDF 302 Educational Psychology: Elementary Education
 - EXE 100 Nature and Needs of Individuals with Special Needs
 3. Three letters of recommendation that attest to the applicant's potential as a graduate student. For students with an undergraduate major in speech-language pathology or communication sciences and disorders, two of the letters must come from faculty in the major. For students from other majors, two of the letters must come from faculty in the major.
 4. Graduate Record Examination (GRE) scores. All three scores will be evaluated.
 5. A written personal statement reflecting reasons for choosing this discipline.
- In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Application Deadline: Applicants must apply by February 1 for summer or fall admission. No applications are accepted for spring admission.

Program Requirements

Required Courses¹	35 cr
SLP 501	Clinical Methods (2)
SLP 511	Neural Processes of Communication (2)
SLP 516	Diagnostic Principles and Procedures (2)
SLP 541	Language Disorders: Birth to Age 5
SLP 580	Research Methods in Speech-Language Pathology (2)
SLP 605	Contemporary Issues in Clinical Interactions: Families and Culture (2)
SLP 606	Fluency Disorders and Cleft Palate
SLP 607	Dysphagia Across the Life Span (2)
SLP 608	Neuromotor Speech Disorders Across the Life Span (2)
SLP 609	Disorders of Voice (2)
SLP 610	Evaluation and Treatment of Phonological Disorders (2)
SLP 615	Aural Rehabilitation
SLP 621	Augmentative and Alternative Communication (2)
SLP 622	Language Disorders of School-Aged Individuals
SLP 623	Acquired Language Disorders
Practicum¹	19 cr
SLP 505	Graduate Practicum in an Educational Setting (6)
SLP 515	Clinical Practicum (7; 1-3 cr per semester)
SLP 611	Externship in Communication Disorders (6)
Master's Project or Master's Thesis¹	3-6 cr
<i>Select one option:</i>	
SLP 690	Master's Project
SLP 695	Master's Thesis (3-6)
Total Required Credit Hours	57-60 cr

¹*Selected under advisement*

All courses are 3 credit hours unless otherwise indicated.

STUDENT PERSONNEL ADMINISTRATION

Master of Science Program

Program Code: MS-SP

Major Code: SPD

HEGIS 0826

Student Personnel Administration Department

Richard J. Hertzlein, *Chair*

Bacon Hall 214C, (716) 878-3789

www.buffalostate.edu/spa

Founded in 1970, the student personnel administration (SPA) program has produced 1,400 alumni and continues to be one of the largest and most diverse programs in the country. The department provides students with the theoretical background and practical experience for professional work in many student personnel areas. The academic program includes an overview of knowledge, practice, problems, and administrative procedures related to institutions of higher education. It emphasizes the role of the student affairs professional in admissions, residence halls, financial aid, registration, orientation, academic and personal advisement, counseling, international student activities, minority student services, career development, student union activities, athletics, alumni affairs, and student affairs administration. The program is relevant not only to individuals currently involved in college personnel work, but also to those interested in working in client-centered careers in community agencies, health delivery, law enforcement, human resource administration, marketing, teaching, and consulting.

STUDENT PERSONNEL ADMINISTRATION

continued

Students may focus on courses and internships in four concentration areas: administration, counseling and student development, community education, and research and evaluation.

Internships: The professional training of the student affairs professional depends heavily on internships that provide practical experience in applying classroom theories. The internship is a vehicle for diversified professional training that encompasses research, planning, and organization; the development of priorities; and principles of student personnel administration and services-oriented work. Furthermore, the internship meets the student's self-education needs, inspires self-confidence and self-reliance, provides experience in ethical behavior when dealing with students and colleagues, and encourages a sense of responsibility to the profession.

Assistantships: Graduate assistantships and other employment opportunities are available in student affairs, academic affairs, and other areas at Buffalo State. Recipients may receive a stipend, as well as waivers of tuition and room costs. For information about hall director positions, contact the director of residence life, Porter Hall; for information about other positions, contact the appropriate campus offices or the Career Development Center, Cleveland Hall 306. Employment opportunities may be available, on a competitive basis, in nearby institutions of higher education or in community agencies. For college-wide assistantship opportunities, visit www.buffalostate.edu/graduateschool.

Professional Organizations: SPA graduates gain mentoring, networking, and professional development support through several organizations, including the Buffalo State Graduate Association for Student Personnel Administrators (GASPA), the Buffalo State Student Personnel Administration (SPA) Alumni Chapter, the College Student Personnel Association of New York State (CSPA), the American College Personnel Association (ACPA), and the National Association of Student Personnel Administrators (NASPA). Information and applications are available through the SPA faculty or in the Student Personnel Administration Department.

Graduation Requirements: A minimum of 36 credit hours are needed for degree completion: 27 credit hours of required coursework and 9 hours of electives. After completing 6 to 12 credit hours, students apply for degree candidacy and are subject to continuous review by the faculty to ensure adherence to professional standards in the classroom and internships. A written comprehensive examination must be completed during a student's final semester (offered in November and April of each academic year).

Contact a program faculty adviser for details on course changes and assistance in choosing an area of concentration (9 elective credit hours and 6 internship/practicum credit hours), and to plan and complete the degree candidacy form.

Admission Requirements:

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.8 (4.0 scale). Applicants who hold a bachelor's degree but do not meet the minimum GPA requirement may be admitted if they either attain a minimum combined quantitative/verbal score of 1000 on the Graduate Record Examination (GRE) or enroll in adviser-designated graduate work as an accepted provisional student and achieve a minimum cumulative GPA of 3.5.

2. Prerequisite academic work and skill development that provides evidence of the applicant's capability to accomplish the master's degree program requirements.

3. Consideration can be given to work-related experience and involvement in the field.

4. Three letters of recommendation.

5. A letter/essay indicating reasons for interest in the program. This will be evaluated as a writing sample.

6. A current résumé.

7. An interview with SPA program faculty may be required.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required Courses27 cr

CSP 616	American Higher Education
CSP 617	Student Development and Learning
CSP 618	Student Personnel Administration
CSP 622	Techniques of Counseling I
CSP 623	Techniques of Counseling II
CSP 624	Internship/Practicum I
CSP 625	Internship/Practicum II
CSP 650	Student Assessment Tests
CSP 689	Methods of Educational Research
Comprehensive Examination (offered in November and April; 0 cr)	

Elective Courses¹9 cr

Select three courses from any of the following areas:

- A. Administration
- | | |
|---------|---|
| CSP 504 | Community College Administration |
| CSP 619 | Management Systems and Leadership in Higher Education |
| CSP 620 | Planning and Finance in Higher Education |
| CSP 651 | The Law and Higher Education |
| CSP 670 | The College Student Movement 1955–1975 |
- B. Counseling and Student Development
- | | |
|---------|---|
| CSP 630 | Group Counseling |
| CSP 632 | Vocational Development and Career Counseling |
| CSP 670 | The College Student Movement 1955–1975 |
| CSP 711 | Seminar in Techniques of Counseling and Psychotherapy |
- C. Community Education
- | | |
|---------|---|
| CSP 504 | Community College Administration |
| CSP 619 | Management Systems and Leadership in Higher Education |
| CSP 632 | Vocational Development and Career Counseling |
| CSP 670 | The College Student Movement 1955–1975 |
- D. Research and Evaluation
- | | |
|---------|--|
| CSP 690 | Master's Project |
| CSP 695 | Thesis; may be substituted for Master's Project (6) |
| EDF 520 | Educational Statistics I (Descriptive and Inferential) |
- E. Any Concentration Area
- | | |
|---------|---------------------------------------|
| CSP 590 | Independent Study (if research-based) |
| CSP 690 | Master's Project |

Other elective courses may be selected from related courses/workshops in various disciplines or interdisciplinary areas with adviser approval.

*Can apply to other concentrations

Total Required Credit hours36 cr

¹Selected under advisement

All courses are 3 credit hours unless otherwise indicated.

TEACHING BILINGUAL EXCEPTIONAL INDIVIDUALS

See Special Education

TECHNOLOGY EDUCATION

Master of Science in Education Program

Program Code: MSED-SP

Major Code: TED

HEGIS 0839.01

Technology Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Richard A. Butz, *Chair*

Upton Hall 314, (716) 878-6018

www.buffalostate.edu/technology

This program develops and enhances technological and professional competencies in technology education and provides a basis for advanced study. Completion of the program leads to the master of science in education degree and satisfies the requirements for eligibility for professional New York State teaching certification.

Program variations must be approved by the student's academic adviser and the department chair. At least half the credit hours in the program must be in technology education.

Admission Requirements:

1. A bachelor's degree in industrial arts/technology education from an accredited college or university with a minimum cumulative GPA of 2.3 (4.0 scale), or a New York State initial certificate to teach industrial arts/technology.

2. Acceptance by the program coordinator.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

This program is currently under review. Please contact the Technology Department for further information.

Program Requirements

Required Courses15-18 cr

CTE/BUS 602	Curriculum Development and Planning
EDF 611	Evaluation in Education
EDF/INT 689	Methods and Techniques of Educational Research
TED 600	Foundations of Technology Education

Elective Courses¹12-15 cr

Master's Project or Master's Thesis3-6 cr

Select one option:

TED 690	Master's Project
TED 695	Master's Thesis (6)

Total Required Credit Hours30 cr

¹ Selected under advisement

All courses are 3 credit hours unless otherwise indicated.

TECHNOLOGY EDUCATION

Postbaccalaureate Teacher Certification Program

Program Code: PBC-SP

Major Code: TED

HEGIS 0839.01

Technology Department

National Council for Accreditation of Teacher Education (NCATE) Accredited

Richard A. Butz, *Chair*

Upton Hall 314, (716) 878-6018

www.buffalostate.edu/technology

The technology education postbaccalaureate teacher certification program leads to eligibility for a New York State initial certificate to teach technology education in grades kindergarten-12. This program is designed for students who have earned a baccalaureate degree in a technology-related field from an accredited college or university and intend to complete coursework required for New York State certification to teach technology.

After successfully completing the teacher certification program and passing required New York State teacher certification exams, students are eligible to apply for New York State certification through the Teacher Certification Office, Caudell Hall 101. No degree or certificate is awarded by Buffalo State.

Financial Assistance: For financial aid purposes, students are considered fifth-year undergraduates, eligible for undergraduate loans.

Admission Requirements:

1. A bachelor's degree from an accredited college or university.

2. Completion of 30 credit hours in technology coursework, including biotechnology, communication, construction, manufacturing, and transportation systems or their equivalents.

In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

Required Courses21 cr

BME 301	Principles of Occupational Education
BME 302	Curriculum and Evaluation in Occupational Education
EDF 303	Educational Psychology
EDU 416	Teaching Literacy in the Secondary School
EXE 372	Teaching Adolescents with Disabilities
TEC 360	Technology Education Methods and Evaluation
TED 100	Introduction to Technology Education

Professional Semesters12 cr

TED 450	Professional Semester (6)
TED 451	Professional Semester (6)

Total Required Credit Hours33 cr

All courses are 3 credit hours unless otherwise indicated.

COURSE DESCRIPTIONS

Guide to Course Descriptions

Individual graduate-level courses are described in alphabetical order by discipline in this section of the catalog.

Course Scheduling

Whether or not a specific course will be scheduled for a given term is contingent on student enrollment, budget support, and adequate staffing. Check the graduate course schedule for updated course scheduling each semester. The descriptions in this catalog are current as of spring 2008.

Undergraduate Courses

This catalog does not list undergraduate courses numbered 101–499. These course descriptions can be found at www.buffalostate.edu. Undergraduate coursework does not fulfill the requirements of an advanced degree.

Here is a sample course listing:

CRS 680
DESIGNING AND DELIVERING CREATIVITY
EDUCATION
3, 3/0; Sp 09, Sp 10

Prerequisites: CRS 559 and CRS 560.

Team-teaching experience in creative studies undergraduate courses under direct supervision of the faculty. With permission of instructor, under special circumstances, team teaching may be done in a school, in industry, or in a special creative problem-solving program.

Here's what it means:

CRS 680

This is a creative studies course, number 680.

DESIGNING AND DELIVERING CREATIVITY EDUCATION

Name of course

3, 3/0

This course earns three credits; it meets for three lecture hours and zero lab hours each week.

Sp 09, Sp 10

This course is tentatively offered spring 2009 and spring 2010. Check current course schedules on the Web to confirm course offerings. If a course listing does not show a date, the department was unable to make a commitment when this catalog went to press, or the course will not be taught during 2008–2010.

The remainder of the course listing describes the subject matter and any prerequisites.

Course Number System

500–599	Generally open to all graduate students
600–699	Generally limited to students within the program and others with specific preparation
700–799	Advanced courses requiring greater preparation

Course Prefix Key

ADE	ADULT EDUCATION
AED	ART EDUCATION
ANT	ANTHROPOLOGY
BIO	BIOLOGY
BME	BUSINESS AND MARKETING EDUCATION
BUS	BUSINESS STUDIES
BXE	BILINGUAL EXCEPTIONAL EDUCATION
CHE	CHEMISTRY
CNS	ART CONSERVATION
COM	COMMUNICATION
CRJ	CRIMINAL JUSTICE
CRS	CREATIVE STUDIES
CSP	STUDENT PERSONNEL ADMINISTRATION
CTE	CAREER AND TECHNICAL EDUCATION
DES	DESIGN
ECO	ECONOMICS
EDC	EDUCATIONAL COMPUTING
EDF	EDUCATIONAL FOUNDATIONS
EDL	EDUCATIONAL LEADERSHIP
EDU	EDUCATION
ENG	ENGLISH
EXE	EXCEPTIONAL EDUCATION
FAR	FINE ARTS

FIN	FINANCE
FLE	FOREIGN LANGUAGE
FRE	FRENCH
GEG	GEOGRAPHY
GES	GEOSCIENCES
HEW	HEALTH AND WELLNESS
HIS	HISTORY
HPR	COACHING AND PHYSICAL EDUCATION
INT	INDUSTRIAL TECHNOLOGY
MAT	MATHEMATICS
MCL	MODERN AND CLASSICAL LANGUAGES
MED	MATHEMATICS EDUCATION
NFS	NUTRITION AND FOOD SCIENCE
PHY	PHYSICS
PLN	PLANNING
PSC	POLITICAL SCIENCE
PSY	PSYCHOLOGY
SAF	SAFETY STUDIES
SCI	SCIENCE
SLP	SPEECH-LANGUAGE PATHOLOGY
SOC	SOCIOLOGY
SPA	SPANISH
SSE	SOCIAL STUDIES EDUCATION
SWK	SOCIAL WORK
TEC	TECHNOLOGY
TED	TECHNOLOGY EDUCATION

ADE

ADULT EDUCATION Educational Foundations Department

ADE/HEW 580 PARENTING/SEXUALITY EDUCATION PRACTICES IN HEALTH 3, 3/0

Prerequisite: Undergraduate coursework in health or human sexuality.

Parenting/sexuality curricula and the utilization of technology in teaching health education; theories and practices in sexuality education in American school systems; appropriate course content specific to different grade levels and cultural settings.

ADE/EDU 584 LITERACY SKILLS AND THE ADULT LEARNER 3, 3/0

Prerequisite: Graduate status.

Theories, practice, curricula, and content of instruction appropriate for adult learners; the theories of Paulo Freire, Ira Shor, and Henry Giroux; collaboratively participate in the design and implementation of an action research project focusing on adult literacy.

ADE 590 INDEPENDENT STUDY 3, 3/0

ADE 600 ADULTHOOD AND DEVELOPMENT 3, 3/0

Prerequisite: Graduate status.

Study of adulthood and development during the adult years; consideration of the physiological and psychological development of the individual from young adulthood through old age—changing roles, conflicts, adjustments, dilemmas, aspirations, ethnicity, potentials, responsibilities, rights, and freedoms—as indicated in theory and research.

ADE 605 HISTORICAL, SOCIAL, AND PHILOSOPHICAL FOUNDATIONS OF ADULT EDUCATION 3, 3/0

Prerequisite: Graduate status.

Historical antecedents, social movement characteristics, and philosophical foundations of adult education, with perspectives on why and where the adult learner and others fit into this evolving field of professional practice.

ADE 610 METHODS OF ADULT EDUCATION 3, 3/0

Prerequisite: Graduate status.

Principles, practices, and evaluation of adult learning across the full spectrum of settings in which adult education is conducted.

ADE 615 ISSUES AND PERSPECTIVES IN ADULT EDUCATION 3, 3/0

Prerequisite: Graduate status.

Nature of adult education and the various programs and situations in which it occurs; key issues in the field and various approaches to adult learning theory; nature of participation; inclusion of ethnic minorities, women, individuals with disabilities, and distance learners; adult learning environments nationally and internationally; emerging trends.

ADE 620 APPLICATION OF INSTRUCTIONAL TECHNOLOGY TO ADULT EDUCATION 3, 3/0

Prerequisite: Graduate status.

Methods of teaching adult learners using traditional and contemporary modes; use of technology—teleconferencing, distance education, online instruction—in the present delivery systems for teaching and learning.

ADE 624 INTERNSHIP 3, 3/0

Supervised internship experience in a student personnel administration, adult education, and/or multidisciplinary setting.

ADE 625 DESIGNING AND EVALUATING PROGRAMS FOR ADULT LEARNERS 3, 3/0

Prerequisite: Graduate status.

Planning, designing, and assessing training outcomes for adult learners; methods and materials in program planning in adult education; review of types of programs, community services, and developing funded proposals.

ADE 634 WORKPLACE LITERACY 3, 3/0

Prerequisite: Graduate status.

Designing, teaching, and accessing workplace literacy and job readiness programs. Methods of developing customized curricula and teaching literacy; English as a second language (ESL) via a socio-cultural literacy framework. Analysis and critique of case studies. Focus on federal, state, and local workforce policies; educating, training, and re-skilling an under-skilled workforce in a global economy; and issues of diversity in the workplace.

ADE 640 HUMAN RESOURCE DEVELOPMENT 3, 3/0

Prerequisite: Graduate status.

Preparation to conduct educational and training programs for workers and volunteers to improve organizational effectiveness. Key competencies and principal roles of human resource development professionals: human performance analysis; training needs assessment; organizational development; career development; program and instructional design; learning materials design; program evaluation; ethical and human diversity issues in training and development.

ADE/CTE 655 DIVERSITY ISSUES IN ADULT EDUCATION AND TRAINING 3, 3/0

Prerequisite: Graduate status.

Teaching and learning implications of diversity for adult educational achievement and career opportunities. Implications for course content and classroom management styles when adult educators are sensitive to race, ethnicity, gender, sexual orientation, class, and physical ability. Methods for structuring course content, designing curricula, and educating learners by promoting and embracing a diverse population of colleagues, learners, workers, and clients.

ADE/EDF 665 INSTRUCTIONAL DESIGN AND ASSESSMENT 3, 3/0

Prerequisite: Graduate status.

Designing instruction to achieve specific learning outcomes; systematic models that facilitate planning, developing, revising, and evaluating instruction; planning instruction that incorporates educational technology.

ADE/CTE 675 POSTSECONDARY TEACHING PRACTICUM 3, 3/0

Prerequisites: Graduate status, ADE 610 or CTE 536, and instructor permission.

Promotes expertise in teaching in human resource development adult education, workforce training, community colleges, and GED program settings. Extended teaching assignments with coach/mentor assistance. Seminar-type discussions reflecting on learning and development of learners as they taught, principles of teaching, their teaching behaviors, strategies promoting continuing growth as teachers. Analyze issues in teaching: diversity, technology, exceptionality, promoting social justice.

ADE 690 MASTER'S PROJECT 3, 3/0

Prerequisite: Graduate status.

A study undertaken by one or more individuals on a problem of special interest, submitted in acceptable form according to directions from the Educational Foundations Department.

AED

ART EDUCATION Art Education Department

AED 500 ART IN THE ELEMENTARY SCHOOL 3, 3/0

Use of art materials, processes, and procedures in the elementary school; individual experience in various media appropriate at different grade levels; consideration of the role of the classroom teacher in self-contained, supervised, or art specialist programs; related problems of the school curriculum.

AED 501 ART DEVELOPMENT IN THE PRESCHOOL CHILD 3, 3/0

Intellectual, emotional, physical, perceptual, and creative development of the young child from birth through kindergarten; roles of parents and teachers in the creative growth of the child; implications for the choice of materials, processes, and procedures appropriate at the preschool level.

AED 502 ART FOR THE EXCEPTIONAL CHILD 3, 3/0

Special problems in the use of art media with children who vary markedly from their peers in emotional, physical, intellectual, or other conditions; individual and/or group investigations of topics ranging from students with disabilities (PL 94-142, Education of All Handicapped Children Act) to the specially gifted or talented students; implications of the choice of materials, processes, and procedures in individual cases; consideration of the role of the art teacher vis-à-vis the school art therapist.

AED 505 FOUNDATIONS IN MUSEUM EDUCATION STUDIES 3, 3/0

History of museum education; practical experience creating interpretive programs and exhibitions using museum collections, archival resources, and publications; overview of museum operations; current and controversial issues and future trends; definition, history, theory, and responsibilities of museums and museum education; opportunity to work firsthand with curators and museum educators to create appropriate and accessible programs for diverse audiences.

AED 506 COLLOQUIUM IN THE ARTS 3, 3/0

Common and related concerns, experiences, and activities in the various arts, including visual and performing arts, and other acts of individual and/or group expression; seminar reports, discussions, presentations; planning of integrated arts activities and investigation for potential implementation in the field; individual or group project as practical.

AED 510 ART MATERIALS WORKSHOP 3, 3/0

Studio experiences with visual arts media, processes, and techniques for art and classroom learning activities; individual and/or group investigations of experiences and adaptations to classroom application. Extra class studio hours as needed.

AED 512 DESIGN PRINCIPLES AND PRACTICES 3, 3/0

General design principles and applications; elements of design in space organization; theoretical and functional applications to individual plans and projects. Tutorial relationship with instructor.

**AED 518
ART EDUCATION AND
MULTICULTURALISM**
3, 3/0

Cultural competence in art education; attitudes, approaches, and materials required for teaching art to today's diverse school populations; understanding and appreciating the arts and life ways of various peoples and their cultures; curriculum development; interaction with various community resources.

**AED 520
ART AND THERAPY**
3, 3/0

Art experiences/products of children and adults in therapeutic settings; slide lectures, demonstrations, films, videotapes, articles, books, observations, and group and field experiences.

**AED 527
FIELD STUDIES**
3, 0/0

Prerequisites: Art education program major; consent of department chair.
Supervised field experiences in the major discipline.

**AED 565
SEMINAR IN FEMINIST ART AND
CRITICISM FOR TEACHING**
3, 3/0

A forum for development and critique of teaching methods, visuals, and instructional materials for using feminist art and criticism in art education; practical direction in applying relevant contemporary art, written criticism, and oral interpretation in classroom settings.

**AED 590
INDEPENDENT STUDY**
3, 0/0

**AED 591
RESEARCH PROJECT**
3, 3/0

Research or investigation of a particular problem in the discipline, planned and carried out by the student, and supervised by the instructor.

**AED 601
ADMINISTRATION AND
SUPERVISION IN ART EDUCATION**
3, 3/0

Role of the supervisor of art in relation to the community, the school administration, the classroom teacher, and the special art teacher; functions of the art consultant and the special art teacher in elementary schools; preparing budgets, procuring equipment, and ordering supplies. Extra class reports and discussions. Elective for art education graduate program students.

**AED 603
INTERNSHIP (ART EDUCATION OR
ART THERAPY)**
3, 3/0

Prerequisite: Consent of department chair.
Supervised internship in an educational setting consistent with the student's program of study.

**AED 604
FUNDAMENTALS OF
EDUCATIONAL PROGRAMMING
FOR MUSEUMS**
3, 3/0

Theories and practices of planning and implementing museum education programs for diverse audiences; techniques and methods for creating innovative programs within a museum setting.

**AED 606
METHODS OF DEVELOPING AND
EVALUATING ART CURRICULA**
3, 3/0

Formulation of standards for analyzing and evaluating teaching materials and strategies as they relate to teacher-student dialogue, learning behavior, and problems of the individual; experimental research studies in schools; may include visits and participation of site personnel.

**AED 609
STUDIO METHODS**
3, 3/0

Technical studio experience as appropriate to the teaching artist: processes, procedures, skills, knowledge, and attitudes; integration of personal and classroom investigations. May be repeated up to three times.

**AED 610
METHODS OF INSTRUCTION IN
NONSTUDIO DISCIPLINES**
3, 3/0

Theoretical and practical background to implement nonstudio activities in the art classroom; approaches to teaching art history, criticism, aesthetics, and multicultural concerns.

**AED 688
SEMINAR IN ART EDUCATION**
3, 3/0

Prerequisite: Completion of 18–21 credit hours.

Contemporary problems; review of curriculum developments, methodology, innovative developments, and interdisciplinary concepts; individualized studies under faculty advisement.

**AED 689
RESEARCH**
3, 3/0

Prerequisite: AED 688.
Individual and group study of methods of research in the discipline; training in research methods, interpretation, evaluation, and adaptation of research findings for application to professional needs.

**AED 690
MASTER'S PROJECT**
3, 3/0

Prerequisite: AED 602 or AED 689.
A study undertaken by one or more individuals on a problem of professional significance, to demonstrate an area of mastery in the field.

**AED 695
MASTER'S THESIS**
6, 6/0

Prerequisite: AED 602 or AED 689.

Individual investigation of an original problem representing a significant contribution to the literature of the field. May be repeated.

ANT

ANTHROPOLOGY Anthropology Department

**ANT 590
INDEPENDENT STUDY**
3, 0/0

**ANT 690
MASTER'S PROJECT**
3, 0/0

**ANT 695
MASTER'S THESIS**
6, 0/0

BIO

BIOLOGY Biology Department

**BIO 590
INDEPENDENT STUDY**
3, 0/0

Independent investigation into a specific area of biology; topic selected by the student in consultation with a faculty member.

**BIO 601
FOUNDATIONS OF CELL AND
MOLECULAR BIOLOGY**
3, 3/0

Prerequisites: Undergraduate courses in cell biology and genetics or instructor permission.

Fundamental paradigms in cell and molecular biology as illustrated by current research; mechanisms by which genes control morphogenesis of plants and animals; evolution of the eukaryotic genome; mechanisms by which the transcription of eukaryotic genes is regulated; regulation of the cell-division cycle in eukaryotic cells. Emphasizes current literature, as well as writing and oral expression about the literature readings.

**BIO 602
FOUNDATIONS OF
ENVIRONMENTAL PHYSIOLOGY**
3, 3/0

Prerequisites: Undergraduate courses in botany and zoology or instructor permission.
Evolution of specialized features in plants and animals that allow them to maintain a stable internal environment while being exposed to a variety of external environmental conditions: adaptations of organisms for environments low in water or oxygen; problems associated with ionic and water regulation in freshwater and marine organisms; fundamental physiological principles that apply to both plants and animals.

**BIO 603
FOUNDATIONS OF ECOLOGY
AND EVOLUTION**
3, 3/0

Prerequisites: Undergraduate courses in ecology and evolution or instructor permission.

Current theories and paradigms of modern ecology and evolution; population and community interactions of organisms; coevolution; ecological and evolutionary genetics; micro- and macroevolution.

**BIO 605
MYCOLOGY**
4, 3/3

Prerequisite: General botany or equivalent.
Taxonomy, morphology, reproduction, physiology, ecology, and economic importance of selected groups of fungi.

**BIO 608
MOLECULAR GENETICS**
3, 3/0

Prerequisite: One course in genetics.
Molecular basis of the structure, replication, and genetic function of DNA; mutation, recombination, and the nature of genes; the genetic code, messenger and transfer RNA, and protein biosynthesis; molecular evolution of proteins.

**BIO 612
TOPICS IN ECOLOGY**
3, 3/0

Prerequisites: One semester each of ecology and biometrics or equivalent.

Lecture and discussion on a specific topic in ecology, such as population ecology, microbial ecology, plant ecology, ecology of the Great Lakes, or advanced limnology. Topics vary with each session. May be taken more than once.

**BIO 616
TOPICS IN ANIMAL PHYSIOLOGY**
3, 3/0

Prerequisites: General physics, organic chemistry, and one year of physiology.
Lecture and discussion on special topics in animal physiology, such as immunology, advanced animal physiology, and animal responses to stress. Topics vary with each session. May be taken more than once.

**BIO 617
RESEARCH SEMINAR**
1, 1/0

Presentations and discussions of current research projects by graduate students in biology. Each participant presents a seminar. Required for all candidates for the M.A. degree in biology.

**BIO 620
SYMBIOLOGY**
3, 3/0

Prerequisites: One semester each of physiology, ecology, and genetics.
Interactions of symbiotes at various levels; physiologic, ecologic, and genetic factors that influence these interactions.

**BIO 625
ICHTHYOLOGY**
3, 2/3

Prerequisite: One semester of ecology or permission of instructor.
Advanced study of the biology of fishes,

including anatomy, physiology, systematic, evolution, ecology, and diversity.

BIO 626
TOPICS IN BOTANY
3, 3/0

Prerequisites: 9 credit hours of botany-oriented courses.

Lecture and discussion on a specific topic in botany, such as biosystematics, dendrology, wetland plants, plant pathology, or plant response to stress. Topics vary with each session. May be taken more than once.

BIO 627
TOPICS IN ZOOLOGY
3, 3/0

Prerequisites: 9 credit hours of zoology-oriented courses.

Lecture and discussion on a specific topic in zoology, such as invertebrate zoology, entomology, fisheries biology, or functional vertebrate morphology. Topics vary with each session. May be taken more than once.

BIO 629
FISHERIES MANAGEMENT
3, 3/2

Prerequisite: One semester of ecology or instructor permission.

Advanced study of ecology and management of fish populations emphasizing inland fisheries in North America. Topics include management philosophies, fisheries statistics and modeling, habitat protection and manipulation, introduced and endangered species, stocking, and Great Lakes fisheries.

BIO 630
STREAM ECOLOGY

Prerequisite: One semester each of ecology and statistics or instructor permission.

Biological, chemical, geomorphic, and hydrologic features affecting the ecology of flowing water systems. Emphasis on freshwater invertebrate life histories, adaptations, and community structure in shallow streams.

BIO/CHE 631
ENVIRONMENTAL TOXICOLOGY
3, 3/0

Fundamental principles of environmental toxicology, including major environmental pollutants, their sources, toxic effects, mechanism of action, and factors that influence the toxicity of a chemical. Processes that govern the fate of a chemical in biological systems.

BIO 635
GREAT LAKES ECOLOGY
3, 3/0

Prerequisite: One semester of ecology or instructor permission.

Study of the North American Great Lakes: physical and chemical features, biological structure, and ecological interactions. Focus on environmental issues, including water quality and the effect of introduced species.

BIO 665
ALGOLOGY
3, 2/2;

Prerequisite: One course in ecology or equivalent.

Taxonomy, ecology, morphology, ultrastructure, physiology, and economic importance of selected species of freshwater algae. May require Saturday field trips.

BIO 670
BIOLOGICAL DATA ANALYSIS
3, 3/0

Prerequisite: One course in statistics.

Experimental design and statistical analysis of biological data; applications of computers to biological investigations. Designed for students in the initial stages of planning their research.

BIO/CHE 672
FORENSIC MOLECULAR BIOLOGY
4, 3/3

Prerequisites: BIO 303 or BIO 350; FOR 612 or CHE 312; CHE 670, CHE 470 or BIO 305; or equivalents.

Applications of biology, biochemistry, and genetics to forensic science with an in-depth look at the evidential information that can be obtained from blood, semen, saliva, and hair. Details of DNA profiling, including DNA extraction, DNA quantification, PCR amplification, STR analysis and interpretation, and mtDNA sequencing. Protein polymorphisms and immunological tests. Laboratory component providing hands-on experience with techniques commonly used in a forensic biology laboratory.

BIO 690
MASTER'S PROJECT
3, 0/0

Prerequisite: Approval of proposal by the student's project committee; open to M.S. in education candidates.

Investigation of a special-interest problem, planned and executed with consultation and advisement from the instructor and the student's project committee.

BIO 695
RESEARCH THESIS IN BIOLOGY
3-6, 0/0

Prerequisite: Approval of proposal by the student's thesis committee; open to M.A. or M.S. in education candidates.

Individual investigation of an original problem submitted in acceptable form according to directions given by the Graduate School.

BME

BUSINESS AND MARKETING EDUCATION Educational Foundations Department

BME 600
PRINCIPLES OF BUSINESS AND MARKETING EDUCATION
3, 3/0

Prerequisite: Teacher certification in an education discipline.

Historical and philosophical developments in business and marketing (distributive) education.

BME 601
RESEARCH SEMINAR
3, 3/0

Prerequisite: Graduate status.

Current research in occupational/vocational/business education; methods of research; locating appropriate information; development of a research proposal. Required for all BUS, CTE, DED, TED students.

BME 602
CURRICULUM DEVELOPMENT AND PLANNING IN BUSINESS AND MARKETING EDUCATION
3, 3/0

Prerequisite: Teacher certification in an education discipline.

Historical developments and changing concepts of curriculum; principles of curricula development; components of the curriculum-development process; dimensions of curriculum design systems; purposes and problems of curriculum evaluation. Required for all, BUS, CTE, and TED students.

BME 604
IMPROVING INSTRUCTION IN BUSINESS AND MARKETING
3, 3/0

Prerequisite: Teacher certification in an education discipline.

Development of instructional techniques and resources; current best practices in educational settings; application of curriculum enhancement through effective pedagogy and program development.

BME 605
EVALUATION IN BUSINESS AND MARKETING EDUCATION
3, 3/0

Prerequisite: Teacher certification in an education discipline.

General principles of evaluation and measurement; construction and use of objective tests, informal devices, and techniques of evaluation applicable to occupational education; selection and use of observation, rating scales, anecdotal records, individual and group projects; interpreting, recording, and using the results of evaluation data for the improvement of instruction. Required for all BUS, CTE, and TED students.

BUS

BUSINESS Business Department

BUS 500
MARKETING OF SERVICES
3, 3/0

Prerequisite: BME 600 Introduction to Marketing or equivalent.

Applications of marketing principles in the service sector; service systems and the principles and practices involved in the marketing of services; past, current, and emerging trends in services marketing; development of marketing programs in the service sector.

BUS 512
INTRODUCTION TO USING ACCOUNTING INFORMATION FOR DECISION-MAKING
3, 3/0

Prerequisite: Graduate standing.

Overview of fundamental financial and managerial accounting statements or reports, including their structure, contents, underlying concepts, analysis, interpretation, and use for economic decision making.

BUS/COM 519
COMMUNICATION FOR MANAGERS
3, 3/0

Theories of effective communication; face-to-face communication; group problem solving; public speaking; power and leadership in organizational settings; persuasive messages and campaigns that public relations practitioners design for a variety of publics. Designed for graduate students interested in improving their workplace communication skills.

BUS 534
SELECTED TOPICS IN BUSINESS STUDIES
3, 3/0

Review and synthesis of current content in business, product knowledge, and distributive education studies.

BUS 535
SMALL-BUSINESS OPERATIONS
3, 3/0

Role of small business in the social, economic, and political environment of the United States; forms of small-business ownerships; management concepts; legal and government controls; marketing principles.

BUS/HIS 536
THE AMERICAN ENTERPRISE SYSTEM
3, 3/0

Problems and issues relating to the free enterprise system functioning within a modern industrial society; analysis of the interrelationships of basic business concepts with the decision-making processes of corporate management; historical trends and their futuristic implications.

BUS 537
ANATOMY OF BANKING
3, 3/0

Modern banking practices and services, organizational structure, credit, the Federal Reserve system, and selected areas of banking operations.

BUS 545
BASIC ACCOUNTING FOR BUSINESS AND NONBUSINESS ORGANIZATIONS
3, 3/0

Financial, managerial, and not-for-profit accounting; accounting concepts, principles, and procedures.

BUS 590
INDEPENDENT STUDY
3, 0/0

BUS 601
RESEARCH SEMINAR
3, 3/0

Prerequisite: Graduate status.

Review of current research in occupational education, study of methods of research, locating appropriate information, and development of a research proposal. Required for all IAE, BUS, DED, and VTE students.

BUS 602
CURRICULUM DEVELOPMENT AND PLANNING IN BUSINESS AND MARKETING EDUCATION
3, 3/0

Prerequisite: Instructor and adviser permission.

Historical development and changing concepts of curriculum; principals of curricula development; components of curriculum design systems, purposes and problems of curriculum evaluation. Required for all TED, BUS, and VTE students.

BUS/EDF/EDU/SWK 603
HUMAN RESOURCE MANAGEMENT
3, 3/0

Personnel-related functions and the utilization of resources to support these functions within organizations: design of in-service training programs; supervisory skills for enhancing motivation and productivity; employee benefit packages; grievance and labor relations plans; proposals to obtain funding and training.

BUS/ADE 640
HUMAN RESOURCE DEVELOPMENT
3, 3/0

Prerequisite: Graduate status.

Preparation to conduct educational and training programs for workers and volunteers to improve organizational effectiveness; key competencies and principal roles of human resource development professionals; human performance analysis; training needs assessment; organizational development; career development; program and instructional design; learning materials design; program evaluation; ethical and human diversity issues in training and development.

BUS/EDF 688
LEADERSHIP IN ORGANIZATIONS
3, 3/0

Prerequisite: BUS/EDF/PSY 715.

Theories of leadership; organizational contexts and culture for leadership; the role of the leader in organizations; leadership competencies for organizational effectiveness; the leader's role in mentoring and coaching for effective performance; the leader's role in achievement of organizational mission and goals.

BUS 690
MASTER'S PROJECT
3, 0/0

BUS 695
MASTER'S THESIS
6, 0/0

Individual investigation of an original problem submitted in acceptable form according to directions given by the Graduate School.

BUS/EDF/PSY 715
MANAGEMENT PRACTICES AND TECHNIQUES
3, 3/0

Major management theories and factors affecting organizational systems; managing conflict and negotiating agreements; effective interpersonal skills for managers; defining problems and generating creative alternatives; types and sources of information needed by managers;

relation of leadership style to staff productivity and development; relating effectively to upper-level management.

BXE

BILINGUAL EXCEPTIONAL EDUCATION **Exceptional Education Department**

BXE 623
POLICIES AND PRACTICES OF BILINGUAL SPECIAL EDUCATION
3, 3/0

Historical, philosophical, and legal foundations for bilingual education and bilingual special education; pedagogical concerns; program design; multicultural perspectives; sociocultural considerations; psycholinguistic concerns; current research findings; current practices in the fields of bilingual education and bilingual special education.

BXE 625
CURRICULUM I: STRATEGIES FOR CULTURALLY AND LINGUISTICALLY DIVERSE EXCEPTIONAL STUDENTS
3, 3/0

Prerequisites: Bilingual special education program major; EXE 500 and EXE 623. Unique needs of culturally and linguistically diverse exceptional students in the areas of language literacy and the development of effective content in English and Spanish; curriculum models, instructional design, teaching methods, and material development; implications of disability and cultural and linguistic diversity.

BXE 626
ASSESSMENT TECHNIQUES IN BILINGUAL SPECIAL EDUCATION
3, 3/0

Prerequisite: Bilingual special education program major. Theoretical and applied knowledge of procedures and instruments for assessing culturally and linguistically diverse individuals who are disabled; role of culture and language in the assessment process; practical techniques, materials, and experience in assessment.

BXE 627
CURRICULUM II: APPLIED STRATEGIES IN BILINGUAL SPECIAL EDUCATION
3, 3/0

Prerequisites: Bilingual special education program major; BXE 625 and BXE 626. Pedagogical and theoretical research in bilingual special education; practical application; 50-hour field participation in which students demonstrate understanding of the strategies and competencies needed to effectively teach English-language learners with disabilities.

BXE 628
BILINGUAL SPECIAL EDUCATION FIELD PRACTICUM
6, 6/0

Prerequisites: Bilingual special education program major; BXE 627. Field-based practicum experience. Direct involvement with English-language learners with disabilities in a local setting. Students assess needs, plan lessons, and teach children with disabilities. Includes weekly seminar.

CHE

CHEMISTRY **Chemistry Department**

CHE 530
ADVANCED ENVIRONMENTAL CHEMISTRY
3, 3/0

Prerequisite: CHE 201. Chemistry of the environment, air, water, soil, living environments, and the effects of technology thereon; the atmosphere, industrial ecosystems, phase interactions, water pollution and treatment, air pollution, global warming and green chemistry, smog, hazard wastes, soil chemistry, and toxicological chemistry.

CHE 540
SPECIAL TOPICS IN ORGANIC CHEMISTRY
3, 3/0

Prerequisite: CHE 202 or equivalent. Advanced topics, discussed in detail, with emphasis on the current state of knowledge; topics are essentially independent of each other. Class may be repeated, provided that a student has not already received credit for the same topic.

CHE 550
ADVANCED PHYSICAL CHEMISTRY
4, 4/0

Prerequisites: Graduate status and instructor permission. Advanced study of thermodynamics and quantum mechanics, with applications to chemical problems.

CHE 560
SPECIAL TOPICS IN INORGANIC CHEMISTRY
3, 3/0

Prerequisite: CHE 460 or equivalent. One of the following topics, presented in detail: coordination chemistry, nonaqueous solvents, the representative elements and lanthanides, synthetic inorganic chemistry. Topics are essentially independent of each other. Class may be repeated, provided that a student has not already received credit for the same topic.

CHE 590
INDEPENDENT STUDY
3, 0/0

CHE 620
KINETICS AND REACTION MECHANISMS
4, 4/0; Offered by contract only.

Prerequisites: CHE 202, CHE 306 or CHE 550, and CHE 460 or instructor permission. Methods of determining mechanisms of

chemical processes. Required for all M.A. in chemistry candidates.

CHE 625
PHYSICAL METHODS OF STRUCTURE DETERMINATION
4, 4/0

Prerequisites: CHE 202 and CHE 306. Methods of determining molecular structure, with special emphasis on electronic spectroscopy, vibrational and rotational spectroscopy, nuclear magnetic resonance spectroscopy, and mass spectrometry. Required for all M.A. in chemistry candidates.

CHE 630
ADVANCED SYNTHETIC TECHNIQUES
5, 0/5; Offered by contract only.
Prerequisites: CHE 201, CHE 202, CHE 203, CHE 204, CHE 460, and CHE 470 or equivalent training in organic, inorganic, and biochemistry. Advanced techniques for the synthesis, purification, and characterization of inorganic, organic, organometallic, and biochemical compounds. Required for all M.A. in chemistry candidates.

CHE/BIO 631
ENVIRONMENTAL TOXICOLOGY
3, 3/0

Fundamental principles of environmental toxicology, including major environmental pollutants, their sources, toxic effects, mechanism of action, and factors that influence the toxicity of a chemical. Processes that govern the fate of a chemical in biological systems.

CHE 670
BIOMOLECULES: PROTEINS, NUCLEIC ACIDS, AND ENZYMES
3, 3/0

Prerequisite: CHE 202. Structure-function relationships in proteins, enzymes, and nucleic acids. Introduction to biochemical techniques for the study of proteins, nucleic acids, and enzymes. Examination of the molecular basis of enzyme function, signal transduction, and neural and sensory responses in living systems.

CHE/BIO 672
FORENSIC MOLECULAR BIOLOGY
4, 3/3

Prerequisites: BIO 303 or BIO 350; FOR 612 or CHE 312; CHE 670, CHE 470 or BIO 305; or equivalents. Applications of biology, biochemistry, and genetics to forensic science with an in-depth look at the evidential information that can be obtained from blood, semen, saliva, and hair. Details of DNA profiling, including DNA extraction, DNA quantification, PCR amplification, STR analysis and interpretation, and mtDNA sequencing. Protein polymorphisms and immunological tests. Laboratory component providing hands-on experience with techniques commonly used in a forensic biology laboratory.

CHE 680
ADVANCED ANALYTICAL CHEMISTRY
3, 3/0

Prerequisites: CHE 301 or equivalent, or instructor permission. A study of chemical analysis using representa-

tive instrumental techniques, including spectroscopy, chromatography, and mass spectroscopy; emphasis on fundamental theory, principles of operation, capabilities, and limitations of various analytical instruments; integration of laboratory-based demonstrations of data collection and analysis using selected analytical techniques.

**CHE 690
MASTER'S PROJECT
3, 3/0**

A study undertaken by one or more individuals on a problem of special interest submitted in acceptable form according to directions given by the Chemistry Department.

**CHE 695
MASTER'S THESIS
6, 0/0**

**CHE 699
SEMINAR AND THESIS DEFENSE
2, 2/0**

Prerequisite: Instructor permission.
Oral presentation of a topic selected from the current literature of chemistry; presentation and defense of the thesis. Required for all M.A. in chemistry candidates.

**CHE 795
RESEARCH THESIS IN CHEMISTRY
6, 0/0**

Individual investigation of an original problem submitted in acceptable form according to directions given by the Chemistry Department and the Graduate School. Required for all M.A. in chemistry candidates.

**FOR 612
PRINCIPLES OF FORENSIC
SCIENCE
3, 3/0**

Prerequisite: CHE 301 or equivalent.
Overview of forensic laboratory procedures and practices. Includes field testing, laboratory screen tests, instrumental analyses, microscopy, molecular identification, blood-alcohol analyses, identification of physical evidence, pattern evidence, crime-scene processing, evidentiary value of chemical analysis, auditing, peer-review procedures, and quality issues. Sampling techniques, data quality, error rates, blind proficiency testing, and their relevance to legal decisions.

**FOR 614
FORENSIC APPLICATIONS OF
INSTRUMENTAL ANALYSIS
4, 2/6**

Prerequisites: CHE 403 or CHE 680; FOR 612 or CHE 312; or equivalents.
Introduction to forensic chemical analysis using representative instrumental techniques, including spectroscopy and chromatography; emphasis on laboratory-based studies for applications of these instruments to provide extensive experience in solving various analytical issues present in forensic laboratories.

**FOR 616
MICROSCOPY IN FORENSIC
SCIENCE
2, 1/2**

Prerequisite: FOR 612 or concurrent registration, or CHE 312 or equivalent.
Introduction to microscopic investigations for

forensic pattern evidence and trace analysis; fundamental theory, principles of operation, varieties, and capabilities of optical microscopy and applications in forensics; fundamentals and applications of transmission and scanning electron microscopy for forensic imaging at atomic-scale resolution and chemical analysis; laboratory sections for pattern analysis and trace analysis.

**FOR 618
DRUG CHEMISTRY AND
TOXICOLOGY
3, 3/0**

Prerequisites: CHE 202; CHE 612 or CHE 312; CHE 680 or CHE 403; or equivalents.
Overview of misused and illegal pharmaceuticals, toxicology, poisons, forensic drug analysis, and illicit drug manufacture. Types, classes, and structures of illicit pharmaceuticals and the laws governing these substances; mechanism of biological activity and toxicological issues of each class; immunoassay technologies for drugs-of-abuse testing analysis; methods of forensic analysis of commonly encountered illegal drugs; and methods of surreptitious manufacture and law enforcement concerns with clandestine laboratories.



**ART CONSERVATION
Art Conservation
Department**

**CNS 600
TECHNIQUES OF EXAMINATION
AND DOCUMENTATION I
2, 2/0**

Methods and techniques used to determine and document the condition of artifacts (deterioration and alteration of works of art caused by aging, trauma, and/or previous restorations); development of both theoretical understanding and advanced practical skills in scientific photography and conservation photo documentation, as well as in general studio photography, including processing and printing. Students learn to recognize and record the structure of artifacts and the manifestations of their deterioration.

**CNS 601
TECHNIQUES OF EXAMINATION
AND DOCUMENTATION I
LABORATORY
1, 0/3**

**CNS 602
TECHNIQUES OF EXAMINATION
AND DOCUMENTATION II
2, 2/0**

Continuation of CNS 600. Ultraviolet, infrared, and radiographic techniques used to examine and document the structure and condition of artworks and cultural artifacts; proper techniques for planning, producing, and delivering professional slide presentations. Emphasizes both theoretical understanding and development of practical skills.

**CNS 603
TECHNIQUES OF EXAMINATION
AND DOCUMENTATION II
LABORATORY
1, 0/3**

**CNS 604
TECHNIQUES OF EXAMINATION
AND DOCUMENTATION III
2, 2/0**

Continuation CNS 602. Advanced techniques in examination and documentation; advanced skills in radiography and in ultraviolet, infrared, and other imaging techniques appropriate to a student's area of conservation specialization; advanced-level readings in conservation literature, as well as in the fields of imaging science and nondestructive testing; research into the application of newly developed examination methods and new applications of existing methods; individual supervision of applications of all techniques to the treatment or analysis of artifacts assigned in advanced courses of paintings, paper, and objects conservation.

**CNS 605
TECHNIQUES OF EXAMINATION
AND DOCUMENTATION III
LABORATORY
1, 0/3**

**CNS 606
TECHNIQUES OF EXAMINATION
AND DOCUMENTATION IV
2, 2/0**

Continuation of CNS 604. Advanced techniques in examination and documentation; advanced skills in radiography and in ultraviolet, infrared, and other imaging techniques appropriate to a student's area of conservation specialization; advanced-level readings in conservation literature, as well as in the fields of imaging science and nondestructive testing; research into the application of newly developed examination methods and new applications of existing methods; individual supervision of applications of all techniques to the treatment or analysis of artifacts assigned in advanced courses in painting, paper, and objects conservation.

**CNS 607
TECHNIQUES OF EXAMINATION
AND DOCUMENTATION IV
LABORATORY
1, 0/1**

Continuation of CNS 604/605. Individually supervised instruction in advanced techniques in examination and documentation; advanced skills in radiography and in ultraviolet, infrared, and other imaging techniques appropriate to a student's area of conservation specialization; advanced-level readings in conservation literature, as well as in the fields of imaging science and nondestructive testing; research into the application of newly developed examination methods and new applications of existing methods; individual supervision of applications of all techniques to the treatment or analysis of artifacts assigned in advanced courses in paintings, paper, and objects conservation.

**CNS 610
CONSERVATION SCIENCE:
PROPERTIES AND BEHAVIOR OF
MATERIALS, METHODS OF
ANALYSIS I
2, 3/0**

The science and technology underlying the physics and chemistry of art and conservation materials, both alone and in combination: relationship between molecular structure and material properties; behavior of art materials during conservation treatments, aging, and interactions with environmental agents; identification, measurement, and control of environmental factors and agents harmful to a work of art; microscopy, microchemical testing, and other analytical methods of value to the practicing conservator in the identification of art materials.

**CNS 611
CONSERVATION SCIENCE:
PROPERTIES AND BEHAVIOR OF
MATERIALS, METHODS OF
ANALYSIS I LABORATORY
1, 0/3**

**CNS 612
CONSERVATION SCIENCE:
PROPERTIES AND BEHAVIOR OF
MATERIALS, METHODS OF
ANALYSIS II
2, 3/0**

Continuation of CNS 610. The science and technology underlying the physics and chemistry of art and conservation materials, both alone and in combination; relationship between molecular structure and material properties; behavior of art materials during conservation treatments, aging, and interactions with environmental agents; identification, measurement, and control of environmental factors and agents harmful to a work of art; microscopy, microchemical testing, and other analytical methods of value to the practicing conservator in the identification of art materials.

**CNS 613
CONSERVATION SCIENCE:
PROPERTIES AND BEHAVIOR OF
MATERIALS, METHODS OF
ANALYSIS II LABORATORY
1, 0/3**

**CNS 614
CONSERVATION SCIENCE:
PROPERTIES AND BEHAVIOR OF
MATERIALS, METHODS OF
ANALYSIS III
3, 3/0**

Continuation of CNS 612. Instrumental methods of analysis used to determine the age, provenance, or condition of an artifact; the physics and chemistry underlying each type of analysis; the way in which analysis is carried out; interpretation of results; advantages and limitations of the method. Students work directly with available instrumentation (including an X-ray powder diffraction unit, a gas chromatograph, and infrared- and ultraviolet-visible spectrophotometers). Students are encouraged to undertake an experimental research project relevant to the conservation specialization each has elected.

CNS 615
CONSERVATION SCIENCE:
PROPERTIES AND BEHAVIOR OF
MATERIALS, METHODS OF
ANALYSIS III LABORATORY
1, 0/3

CNS 616
CONSERVATION SCIENCE:
PROPERTIES AND BEHAVIOR OF
MATERIALS, METHODS OF
ANALYSIS IV
3, 3/0

Continuation of CNS 614. Instrumental methods of analysis used to determine the age, provenance, or condition of an artifact; the physics and chemistry underlying each type of analysis; the way in which analysis is carried out; interpretation of results; advantages and limitations of the method. Students work directly with available instrumentation (including an X-ray powder diffraction unit, a gas chromatograph, and infrared- and ultraviolet-visible spectrophotometers). Students are encouraged to undertake an experimental research project relevant to the conservation specialization each has elected.

CNS 617
CONSERVATION SCIENCE:
PROPERTIES AND BEHAVIOR OF
MATERIALS, METHODS OF
ANALYSIS IV LABORATORY
1, 0/3

CNS 620
TECHNOLOGY AND
CONSERVATION OF PAINTINGS I
2, 2/0
Historical survey of processes employed by artists and craftsmen in the fabrication of paintings: construction and characteristics of the various media and materials; relation of the method of fabrication to physical and aesthetic characteristics. Students duplicate some processes in the studio and observe demonstrations of others. Field trips.

CNS 621
TECHNOLOGY AND
CONSERVATION OF PAINTINGS I
LABORATORY
1, 0/3

CNS 622
TECHNOLOGY AND
CONSERVATION OF PAINTINGS II
2, 2/0
Lectures, demonstrations, and in-studio discussion of actual treatment problems, basic techniques, and materials used in the conservation of easel paintings; causes and evidences of deterioration in painting; proper methods of handling, packing, and shipping. Field trips.

CNS 623
TECHNOLOGY AND
CONSERVATION OF PAINTINGS II
LABORATORY
1, 0/3

CNS 624
TECHNOLOGY AND
CONSERVATION OF PAINTINGS III
2, 3/3

Continuation of CNS 622. More complex treatment problems that broaden students' repertoire of skills and further develop acuity in connoisseurship as it relates to the choices involved in working through a treatment.

CNS 626
TECHNOLOGY AND
CONSERVATION OF PAINTINGS IV
4, 3/6

Students select an area of specialization (requires approval of the faculty member involved) and then participate in unique conservation treatments, which may involve research and scientific experimentation.

CNS 630
TECHNOLOGY AND
CONSERVATION OF WORKS
OF ART ON PAPER I
2, 2/0

The structure and fabrication of paper and media commonly found in works of art on paper; causes and effects of paper deterioration; examination and identification of varying papers and media. Field trips.

CNS 631
TECHNOLOGY AND
CONSERVATION OF WORKS OF
ART ON PAPER I LABORATORY
1, 0/3

CNS 632
TECHNOLOGY AND
CONSERVATION OF WORKS OF
ART ON PAPER II
2, 2/0

History and theories of various techniques in paper conservation (washing, neutralization, bleaching, backing/lining, adhesives, matting); hands-on practice of these and other techniques in assigned conservation treatment projects during the studio periods. Field trips.

CNS 633
TECHNOLOGY AND
CONSERVATION OF WORKS OF
ART ON PAPER II LABORATORY
1, 0/3

CNS 634
TECHNOLOGY AND
CONSERVATION OF WORKS OF
ART ON PAPER III
2, 3/3

Continuation of CNS 632. More complex problems and treatment techniques.

CNS 636
TECHNOLOGY AND
CONSERVATION OF WORKS OF
ART ON PAPER IV
4, 3/6

Students select an area of specialization (requires approval of the faculty member involved) and then participate in unique conservation treatments, which may involve research and scientific experimentation.

CNS 640
TECHNOLOGY AND
CONSERVATION OF OBJECTS I
2, 2/0

Technological history and conservation of a wide variety of materials encountered in historic and artistic objects: metals, glass, ceramics, wood, decorative surface techniques

(lacquering, japanning, gilding), skins and other organics, stone; fabrication techniques and how they can be identified; conservation treatments and recommendations; studio sessions include demonstrations of techniques and supervised work on a variety of objects. Field trips.

CNS 641
TECHNOLOGY AND
CONSERVATION OF OBJECTS I
LABORATORY
1, 0/3

CNS 642
TECHNOLOGY AND
CONSERVATION OF OBJECTS II
2, 2/0

Continuation of CNS 640. Technological history and conservation of a wide variety of materials encountered in historic and artistic objects: metals, glass, ceramics, wood, decorative surface techniques (lacquering, japanning, gilding), skins and other organics, stone; fabrication techniques and how they can be identified; conservation treatments and recommendations; studio sessions include demonstrations of techniques and supervised work on a variety of objects. Field trips.

CNS 643
TECHNOLOGY AND
CONSERVATION OF OBJECTS II
LABORATORY
1, 0/3

CNS 644
TECHNOLOGY AND
CONSERVATION OF OBJECTS III
2, 3/3

A continuation of the first year of demonstrations and supervised work in which students are encouraged to experiment with fabrication techniques that have some bearing on their conservation projects.

CNS 646
TECHNOLOGY AND
CONSERVATION OF OBJECTS IV
4, 3/6

Students select an area of specialization (requires approval of the faculty member involved) and then participate in unique conservation treatments, which may involve research and scientific experimentation.

CNS 685
PROFESSIONALISM IN
CONSERVATION I
2, 2/0

Professional ethics and standards in relation to works of art and colleagues; systems for surveying collections; instructing other museum departments; assisting the public to better understand conservation principles; practical aspects of storing and handling hazardous materials; establishing, insuring, and equipping a conservation studio.

CNS 686
PROFESSIONALISM IN
CONSERVATION II
1, 1/0

Continuation of CNS 685. Ethical and practical aspects of professional conservation activity. Students specializing in paintings, paper, or objects attend one of three concurrent seminars aimed at enriching course material covered in previous semesters, as

well as introducing new topics for discussion and/or demonstration. Guest speakers from conservation and allied professions. Field trips.

CNS 695
STUDENT SPECIALIZATION
4, 3/6

Directed study course, guided by one or more faculty members, in which the student performs research and/or treatment related to a selected artifact or group of artifacts within his or her chosen concentration. Procedures are completely documented and presented in both oral and written form at the end of the semester.

CNS 698
INTERNSHIP SUSTAINING
0, 0/0

CNS 699
INTERNSHIP
12, 1/40

A 12-month off-campus academic program under the direction of an established conservator working either privately or within an institution. Both the program of study and the supervising conservator must be approved by the department faculty. Department faculty monitor student progress through regular reports from the internship supervisor and intern.

COM

COMMUNICATION Communication Department

COM 519
COMMUNICATION FOR LEADERS
AND MANAGERS
3, 3/0

Theories of effective communication; face-to-face communication; group problem solving; public speaking; power and leadership in organizational settings; the persuasive messages and campaigns that public relations practitioners design for a variety of publics. Designed for graduate students interested in improving their workplace communication skills.

COM 590
INDEPENDENT STUDY
3, 0/0

COM 610
STRATEGIC PUBLIC RELATIONS
3, 3/0

Prerequisite: Admission to the graduate program in public relations management. Organizational principles and strategic planning practices underscoring effective management of public relations.

COM 620
PUBLIC RELATIONS
MANAGEMENT
3, 3/0

Prerequisites: COM 610; admission to the graduate program in public relations management. Management of public relations with diverse publics in various environments, including internal, media, consumer, community, and investor relations.

COM 630
APPLICATIONS OF PUBLIC RELATIONS
3, 3/0

Prerequisites: COM 610 and COM 620; admission to the graduate program in public relations management.

Management of various elements in the production of public relations messages: writing, design, and research. A foundation for formal research in public relations planning, implementation, and evaluation.

COM 640
CERTIFICATE PROJECT IN PUBLIC RELATIONS
3, 3/0

Prerequisites: COM 610 and COM 620; prerequisite or corequisite: COM 630.

Practical application of knowledge acquired in COM 610, COM 620, and COM 630 through the development of a strategic public relations campaign or project.

COM 690
MASTER'S PROJECT
3, 0/0

Prerequisites: COM 610 and COM 620; prerequisite or corequisite: COM 630.

Practical application of knowledge acquired in COM 610, COM 620, and COM 630 through the development of a strategic public relations campaign or project.

COM 695
MASTER'S THESIS
6, 0/0

CRJ

CRIMINAL JUSTICE Criminal Justice Department

CRJ 501
THEORETICAL PERSPECTIVES ON CRIME AND CRIMINAL JUSTICE
3, 3/0

Patterns and trends in crime and victimization in the United States; the complex relationships between theoretical explanations of criminal behavior and criminal justice policies and priorities; theoretical and empirical foundations of criminal behavior and crime control; development of writing and conceptual skills.

CRJ 504
RESEARCH METHODS IN CRIMINAL JUSTICE
3, 3/0

Prerequisite: Graduate status or instructor permission.

Nature of research in criminal justice: theory, experimental and quasi-experimental design, sampling, measurement, data analysis, and ethics.

CRJ 508
HISTORY OF CRIMINAL JUSTICE
3, 3/0

Prerequisite: Graduate status or instructor permission.

Societal responses to crime and disorder in the United States from the colonial period through the twentieth century; social forces

that influenced the development of criminal law and its institutions of social control; readings in traditional and revisionist scholarship on social disorder, law, crime, police, courts, prisons, and juvenile justice.

CRJ 590
INDEPENDENT STUDY
3, 3/0

CRJ 601
CORRECTIONAL STRATEGIES
3, 3/0

Prerequisite: Graduate status.

Historical, philosophical, theoretical, and legal dimensions of correctional practices in the United States; contemporary correctional strategies and services, including institutional and community-based programs, within the context of contemporary correctional policy.

CRJ 602
ORGANIZATIONAL BEHAVIOR AND THE MANAGEMENT PROCESS IN CRIMINAL JUSTICE
3, 3/0

Prerequisite: Undergraduate advanced administration in criminal justice or equivalent.

Managerial environment of criminal justice organizations; analysis and application of administrative science to improving crime control agency management.

CRJ 603
ADMINISTRATION OF JUSTICE
3, 3/0

Prerequisite: Graduate status.

Intensive and integrative analysis of the administration of criminal justice. Uses a pluralistic model of public crime control policy making to examine existing and possible future efforts and effects on the American criminal justice and criminal-legal system and its agencies and operations. Extensive exposure to the criminal justice system, supporting social science, and legal literature in the field.

CRJ 604
CRIMINAL COURTS
3, 3/0

Theory of courts and the legal, social, and political processes that significantly affect the operation of the criminal courts, the administration of justice, and judicial decision making; the interrelationship among the social and political forces that influence court decisions and justice.

CRJ 605
LAW AND SOCIAL CONTROL
3, 3/0

Prerequisite: Graduate status or instructor permission.

Nature of social control as it is vested in the objectives, procedures, and authority of law and social institutions; social and legal implications of social control, and the limits of criminal law as a means of social control.

CRJ 606
LAW ENFORCEMENT ISSUES
3, 3/0

Prerequisite: Graduate status or instructor permission.

Selected issues relating to the role and operations of law enforcement in a time of complex social change. Topics vary as

developing issues and problems affect the police.

CRJ 608
SPECIAL TOPICS IN CRIMINAL JUSTICE
3, 3/0

Prerequisite: Graduate status.

Intensive analysis of a special topic(s) not covered in the existing curriculum, to be determined by relevancy and currency of the topic(s), student interests, and the availability of resources and expertise to teach the specific subject matter. May be taken twice (up to 6 credits).

CRJ 620
WHITE-COLLAR CRIME
3, 3/0

Prerequisite: Graduate status.

Theoretical and empirical literature on upper-world crime and its impact on society; the relationship between and effectiveness of criminal, civil, and regulatory processes; characteristics of offenders.

CRJ 622
JUVENILE JUSTICE
3, 3/0

Prerequisite: Graduate status.

Historical, philosophical, theoretical, and legal foundations of juvenile justice systems in states across the country; the relationship between juvenile delinquency and youth crime; various state juvenile justice strategies; empirical studies of interventions to combat drug behavior; gangs and criminal violence; the effectiveness of the complex decisions made by the juvenile justice system in addressing delinquency and youth crime.

CRJ 624
COMPUTER APPLICATION
3, 3/0

Prerequisite: Graduate status or instructor permission.

Various computer applications of basic statistical methods as they apply to criminal justice; a combination of lectures on both descriptive and inferential statistics and hands-on experience in the computer lab, designed to increase analytical ability through quantitative training exercises.

CRJ 625
RACE AND ETHNICITY IN CRIMINAL JUSTICE
3, 3/0

Prerequisite: CRJ 501.

Manifestations of racial and ethnic stratification in American society and their effects on crime and the administration of criminal justice in the United States; history of racial stratification in the United States; effects of racial stratification on the criminality of minority groups; differential enforcement of the law against members of minority groups at different phases of the criminal justice process.

CRJ 626
GENDER ISSUES IN CRIMINAL JUSTICE
3, 3/0

Prerequisite: CRJ 501.

Gender differences and their effects on criminal behavior, law, and the criminal justice process; crimes of which women are disproportionately victims; the extent, types, distinguishing characteristics, and theories of female criminality; criminal justice policies and practices that result in the differential treatment of female victims, offenders, and practitioners.

CRJ 628
ORGANIZED CRIME
3, 3/0

Prerequisite: Graduate status.

History, structure, operation, and theories of organized crime, and the problems of control that law enforcement faces; interaction among criminals, victims, community, law enforcement, and the laws within the pluralistic political context.

CRJ 630
CONSTITUTIONAL ISSUES IN CRIMINAL JUSTICE
3, 3/0

Prerequisite: Admission to the criminal justice master's degree program or instructor permission.

Legal reasoning, writing briefs, and legal research; identifying and analyzing selected Supreme Court cases, with an emphasis on the First, Fourth, and Fifth Amendments of the U.S. Constitution; examining former ideologies for comparison with current trends, issues, and ideologies, emphasizing the comprehension of legal thought and how it changes. Uses the casebook method of study.

CRJ 635
CRIMINAL JUSTICE ETHICS
3, 3/0

Prerequisite: Graduate status.

Ethics as a component of criminal justice: overview of basic ethical concepts and theories; macro-level ethical issues and problems in the criminal justice process; specific ethical problems of the various components of the criminal justice process.

CRJ 690
MASTER'S PROJECT
3, 0/0

Research or investigation of a particular problem, planned and carried out by the student with consultation and guidance from the instructor.

CRJ 710
RESEARCH PROJECT
3, 3/0

Prerequisites: Graduate status, instructor permission, and department approval.

Participation in an ongoing research project by invitation of a criminal justice faculty member. May be taken only once.

CRS

CREATIVE STUDIES Creative Studies Department

CRS/EDU 509 INTRODUCTION TO THE GIFTED, TALENTED, AND CREATIVE LEARNER 3, 3/0

Introduction to talent development and creativity in students, examining both the historical foundations and the current state of the field. Characteristics and identification of academically gifted, creative, and talented students from diverse backgrounds and areas of ability who learn at a pace and level that are significantly different than their classmates.

CRS/EDL 559 PRINCIPLES IN CREATIVE PROBLEM SOLVING 3, 3/0; F 08, Sp 09, F 09, Sp 10

Theory and application of the Creative Problem Solving (CPS) process; practice in both individual and group uses for either personal or professional contexts; group work and active participation are expected.

CRS 560 FOUNDATIONS OF CREATIVE LEARNING 3, 3/0; F 08, Sp 09, F 09, Sp 10

Theory and research that form the foundation of the discipline of creativity studies; development of awareness and understanding of basic principles, select definitions, models, and theories and practice in applying them in a variety of contexts. Group interaction, discussion, and project work are expected.

CRS 570 CREATIVE PROBLEM-SOLVING EXPERIENCES 1, 3/0

Current issues, procedures, and principles of creative thinking and problem solving. Students make observations and discuss and evaluate individual experiences.

CRS 580 CREATIVITY ASSESSMENT: METHODS AND RESOURCES 3, 3/0; F 08, Sp 09, F 09, Sp 10

Practical information on methods and resources for creativity assessment; review of basic measurement principles and a critique of specific tools used to assess creativity in both education and business. Students receive personal feedback on a number of measures and develop a profile of their own creative strengths.

CRS 585 LEARNING STYLE METHODS/ RESOURCES FOR CREATIVE AND TALENT DEVELOPMENT 3, 3/0

Applying learning style processes to guide planning for creative and talent development; information and hands-on experience on documenting students' learning style strengths.

CRS 590 INDEPENDENT STUDY 3, 0/0

CRS 610/EDL 683 FACILITATION OF GROUP PROBLEM SOLVING 3, 3/0; F 08, Sp 09, F 09, Sp 10

Prerequisite: CRS 559.
Advanced strategies for leading small groups through the Creative Problem Solving (CPS) process; mastery of facilitation techniques and skills. Students receive expert feedback on their facilitation skills as they apply creative strategies to real issues. Examines conceptual relationships between facilitation and change leadership; develops basic change leadership skills.

CRS 614 ADVANCED COGNITIVE TOOLS FOR CREATIVE PROBLEM SOLVING 3, 3/0

Prerequisite: CRS 559.
A focus on developing students' skills in applying and facilitating advanced creative problem-solving tools that involve diagnostic, visionary, strategic, ideational, evaluative, contextual, and tactical thinking. The cognitive tools are drawn from various fields, such as quality improvement and strategic management, and include decision making and various problem-solving models.

CRS/EDU/EXE 621 CURRICULUM DEVELOPMENT IN GIFTED, TALENTED, AND CREATIVE EDUCATION 3, 3/0

Prerequisite: EDU or EXE 509.
Designed to facilitate approval of appropriate curriculum, materials, instructional methods, and evaluation strategies for development of creativity and education of individuals who demonstrate gifted behaviors and talents. Instructional and curricular models, differentiated teaching/learning and creative/critical thinking strategies, collaboration with the school community.

CRS 625 CURRENT ISSUES IN CREATIVE STUDIES 3, 3/0; F 08, Sp 09, F 09, Sp 10

Prerequisite: CRS 559 or CRS 560.
In-depth survey of current issues on the nature or nurture of creativity; skill development in research and scholarship to increase critical thinking skills and general content literacy of creativity practitioners in any discipline; review, analysis, and interpretation of findings from empirical and nonempirical sources, with some emphasis on the background and development of research at the International Center for Studies in Creativity.

CRS 635 CREATIVITY AND CHANGE LEADERSHIP 3, 3/0; Sp 09, Sp 10

Prerequisites: CRS 560 and CRS 625.
Culminating activities that cap the Foundations of Creativity strand of the curriculum; understanding and applying the characteristics of change leadership in the

context of creativity and Creative Problem Solving (CPS); theoretical and practical launching point for students to examine their future contributions to the field, domain, and discipline by articulating their personal philosophy and definition of creativity; relation of the CPS process and other change methods to the challenge of making lasting change in other disciplines, such as business, education, psychology, sociology, history, philosophy, or the arts or sciences.

CRS 670 FOUNDATIONS IN TEACHING AND TRAINING CREATIVITY 3, 3/0; F 08, Sp 09, F 09, Sp 10

Prerequisites: CRS 559 and CRS 610.
Practical experience in using principles of creative learning, Creative Problem Solving (CPS), and leadership to facilitate groups; guided practice and independent work in realistic teaching/training situations to develop independent learners and reflective practitioners; use of CPS facilitation skills to develop instructional designs and examine ways to modify teaching and leading with CPS in various groups or situations.

CRS 680 DESIGNING AND DELIVERING CREATIVITY EDUCATION 3, 3/0; Sp 09, Sp 10

Prerequisites: CRS 559 and CRS 560.
Team-teaching experience in creative studies undergraduate courses under direct supervision of the faculty. With permission of instructor, under special circumstances, team teaching may be done in a school, in industry, or in a special creative problem-solving program.

CRS 690 MASTER'S PROJECT 3, 0/0; F 08, Sp 09, F 09, Sp 10

Prerequisites: CRS 559 and CRS 610.
Development and implementation of an applied project requiring Creative Problem Solving (CPS), change leadership, and facilitation skills; definition and implementation of change initiatives that have a direct impact either on the community or for the field of creativity in general; development of analytical skills in the formation and evaluation of the success of the projects.

CRS 795 MASTER'S THESIS 6, 0/0; F 08, Sp 09, F 09, Sp 10

Prerequisites: CRS 559, CRS 560, and CRS 580.
Design and implementation of empirical research (qualitative or quantitative) designed to make new and useful contributions to the field of creativity. Students work closely with faculty and, in many cases, join ongoing programs of research within the department.

CSP

STUDENT PERSONNEL ADMINISTRATION Student Personnel Administration Department

CSP 504 COMMUNITY COLLEGE ADMINISTRATION 3, 3/0

Prerequisite: Graduate status.
Purposes, functions, and characteristics of the community/two-year college; profile of student populations; historical and philosophical evolution; organization and leadership; finance, governance, and management of academic and support services; and relationship to the surrounding community.

CSP 590 INDEPENDENT STUDY 3, 0/0

Prerequisites: Graduate status and SPA program faculty member approval.
Involvement in scholarly and special project/program development.

CSP 616 AMERICAN HIGHER EDUCATION 3, 3/0

Prerequisite: Graduate status.
Evolution of American higher education: its history and philosophy; faculty and students; curriculum; governance; and the impact of race, gender, class, ability, and sexual orientation.

CSP 617 STUDENT DEVELOPMENT AND LEARNING 3, 3/0

Prerequisite: Graduate status.
Assessing and meeting the needs of diverse student populations; theories of college student development and learning; college student characteristics, attributes, values, and learning styles; impact of the college experience on students; designing educational and programming interventions to directly enhance the student learning environment.

CSP 618 STUDENT PERSONNEL ADMINIS- TRATION 3, 3/0

Prerequisite: Graduate status.
Philosophy, organization, management, and emergence of student services; evolution of specialized student affairs programs and their impact on institutional culture and campus ecology; "model" student affairs programs in four-year and two-year, public and private, religious and secular, large and small colleges and universities.

CSP 619 MANAGEMENT SYSTEMS AND LEADERSHIP IN HIGHER EDUCATION 3, 3/0

Prerequisites: Graduate status and CSP 618.
Management systems theory and practice in higher education and academic and student affairs; partnerships; organizational culture; motivation and evaluation; authority and leadership. Students apply course concepts to institutional situations and problems faced in the day-to-day administration of services, programs, facilities, and staff.

**CSP 620
PLANNING AND FINANCE IN
HIGHER EDUCATION
3, 3/0**

*Prerequisites: Graduate status
and CSP 618.*

Fundamentals of college and university finance and economics; underlying decision support systems; institutional research in the policy-making and planning processes in higher education; strategic budgeting; resource allocation; assessment; research; new trends in grant development; alternative financing; external relations.

**CSP 622
TECHNIQUES I: COUNSELING
AND INTERVIEWING
3, 3/0**

Prerequisite: Graduate status.

Intentional interviewing, conflict resolution, and self-assessment for the helping professions: self-development of the student as a counselor; basic counseling skills appropriate for effective listening, assertion, supervising, and interviewing; individual and group facilitation and problem-solving skills.

**CSP 623
TECHNIQUES II: THEORIES
OF COUNSELING FOR A
MULTICULTURAL SOCIETY
3, 3/0**

Major and evolving theories of counseling; training in counseling techniques as applied to a diverse student/client population; cultural and life-choice differences; issues of gender, age, and the needs of the learning and physically challenged; counseling interventions necessary to serve students/clients who are addicted or are experiencing loss, stress, indecision, alienation, intercultural conflict, or relationship abuse; counselor self-knowledge.

**CSP 624
INTERNSHIP/PRACTICUM I
3, 3/0**

Prerequisite: Graduate status.

Administrative-based internship or supervised counseling practicum; seminar in contemporary issues/trends in college student personnel administration. All SPA majors are required to complete both internship/practicum courses with a total of 300 internship/practicum hours in their fieldwork.

**CSP 625
INTERNSHIP/PRACTICUM II
3, 3/0**

Prerequisite: CSP 624.

Administrative-based internship or supervised counseling practicum; seminar in contemporary issues/trends in college student personnel administration; critical issues in society and higher education today, utilizing the case study method of instruction. All SPA majors are required to complete both internship/practicum courses with a total of 300 internship/practicum hours in their fieldwork.

**CSP 630
GROUP COUNSELING
3, 3/0**

Prerequisite: Graduate status.

Group counseling theory, research, and

practice; group dynamics; psychological processes operating in groups; leadership styles; therapeutic interventions and techniques as applied in various staff, team, and group settings; applications of theories and methods for effective group functioning and counseling leadership.

**CSP 632
VOCATIONAL DEVELOPMENT
AND CAREER COUNSELING
3, 3/0**

Prerequisite: Graduate status.

Theories of career development and occupational decision making through the life span; career patterns and school-to-work transitions; administration of career information resources and specialized client services; computers and career-related assessment instruments for career counseling in educational and community settings.

**CSP 650
STUDENT ASSESSMENT: TESTS
AND MEASUREMENT
3, 3/0**

Prerequisite: Graduate status.

Basic appraisal techniques, including qualitative and quantitative methods, ethical principles, rating scales, survey instruments, and educational testing; descriptive statistical principles of student evaluation; uses of computers and tests in outcomes assessment, and research.

**CSP 651
THE LAW AND HIGHER
EDUCATION
3, 3/0**

Prerequisite: Graduate status.

College students and the law; academic freedom and First Amendment issues; trends in contemporary litigation; risk management; legislative, regulatory, and compliance issues; affirmative action, equal education and employment opportunity; real and simulated administrative situations; legal potentialities and implications for liability; ethical practice in serving student and institutional interests.

**CSP 670
THE COLLEGE STUDENT
MOVEMENT 1955–1975
3, 3/0**

Overview of the history and linkages among the American college student, civil, and human rights movements of the 1960s and 1970s. This pedagogical perspective can be applied to American history, educational history, rhetorical studies, American higher education, women's studies, African American and Latino studies, and other areas concerned with the social sciences and the humanities.

**CSP 689
METHODS AND TECHNIQUES OF
EDUCATIONAL RESEARCH
3, 3/0**

*Prerequisites: SPA program major;
CSP 650.*

Background of educational research; selection and development of research problems; sources of information and data; methods of educational research; collection, treatment, application, and interpretation of research data; organizing and writing a research report. Research

techniques and methods emphasize higher education and student personnel administration application.

**CSP 690
MASTER'S PROJECT
3, 3/0**

A study undertaken by one or more individuals on a problem of special interest submitted in acceptable form according to directions given by the Graduate School.

**CSP 695
MASTER'S THESIS
6, 0/0**

Individual investigation of an original problem, submitted in acceptable form according to directions given by the Graduate School.

**CSP 711
SEMINAR IN TECHNIQUES
OF COUNSELING AND
PSYCHOTHERAPY
3, 3/0**

*Prerequisites: CSP 622; instructor
permission.*

A continuation of counseling theories, processes, and techniques based on the traditions of therapeutic psychology: schools of psychoanalytic, behaviorist, cognitive, humanistic, and transpersonal psychology; current holistic trends in treatment methods and professional services; established and evolving techniques and theories of counseling and psychotherapy. Detailed focus on six to nine selected therapies.

CTE

CAREER AND TECHNICAL EDUCATION Educational Foundations Department

**CTE 530
CAREER EDUCATION: RATIONALE,
NATURE, AND CONCEPTS
3, 3/0**

Career education concepts, terminology, and models for elementary school through college; present programs, research, and current thinking on career education.

**CTE 536
CONTEMPORARY METHODOLOGY
3, 3/0**

New and emerging techniques of instruction and their applications to specific individual problems; development of models appropriate to students' particular subject areas.

**CTE 550
ORGANIZATION OF DIVERSIFIED
COOPERATIVE WORK-STUDY
PROGRAMS
3, 3/0**

Information for occupational teachers and department chairs or supervisors interested in establishing diversified cooperative programs; procedures for promoting a new program; working with advisory boards; developing employment opportunities; arranging trainee outlines; planning instructional facilities; securing Regents accreditation.

**CTE 555
OPERATION OF DIVERSIFIED
COOPERATIVE WORK-STUDY
PROGRAMS
3, 3/0**

Conducting effective instruction in diversified cooperative programs; interviewing employers; supervising trainees; interpreting legal aspects; preparing records and reports; conducting classes in related theory.

**CTE 590
INDEPENDENT STUDY
3, 0/0**

**CTE 600
CONTEMPORARY ISSUES IN
OCCUPATIONAL EDUCATION
3, 3/0**

Current issues, practices, policies, and literature in occupational education.

**CTE 601
SUPERVISION OF VOCATIONAL
EDUCATION
3, 3/0**

Nature and scope of supervision; surveying and analyzing needs and facilities; planning, initiating, and maintaining supervisory programs; evaluating procedures and outcomes; trends in occupational education.

**CTE 602
ADMINISTRATION OF
VOCATIONAL EDUCATION
3, 3/0**

Nature and scope of administering vocational technical programs: curriculum; integration with industry; evaluation; community relationships; advisory board development; state and national relationships.

**CTE 603
SELECT TOPICS IN THE
ORGANIZATION AND
ADMINISTRATION/SUPERVISION
OF VOCATIONAL EDUCATION
3, 3/0**

*Prerequisite: CTE 601 or instructor
permission.*

Problems arising in the organization, administration, and supervision of vocational technical education.

**CTE 604
TECHNICAL PROJECT
3, 3/0**

Internship experience with industry or business to study new techniques, operations, and processes, cooperatively initiated by faculty and student. Students develop instructional material reflecting the new knowledge and skills gained.

**CTE 605
OCCUPATIONAL GUIDANCE FOR
CAREER EXPLORATION
3, 3/0**

*Prerequisite: Graduate status and career
and technical education program major
or instructor permission.*

Vocational guidance techniques and procedures that may be effectively used in career counseling for the changing world of work.

**CTE 606
HISTORY AND PHILOSOPHY OF
OCCUPATIONAL EDUCATION
3, 3/0**

Historical review of the philosophical, sociological, economic, and political indices that have influenced the development of vocational technical education.

**CTE 620
STRUCTURE OF
OCCUPATIONAL PROGRAMS
3, 3/0**

Prerequisite: Graduate status or instructor permission.

Structure of occupational education; survey and analysis of present programs; assessment of articulation between programs; viability of the occupational education structure in light of internal and external forces promoting change.

**CTE 625
INTERRELATIONSHIPS OF
LABOR, MANAGEMENT, AND
OCCUPATIONAL EDUCATION
3, 3/0**

Roles of labor and management in American society, their relationship to occupational education, and their historical development; the impact of technology; interpreting the needs of industry for occupational and continuing education.

**CTE/ADE 655
DIVERSITY ISSUES IN ADULT
EDUCATION AND TRAINING
3, 3/0**

Prerequisite: Graduate status.

Teaching and learning implications of diversity for adult educational achievement and career opportunities. Implications for course content and classroom management styles when adult educators are sensitive to race, ethnicity, gender, sexual orientation, class, and physical ability. Methods for structuring course content, designing curricula, and educating learners by promoting and embracing a diverse population of colleagues, learners, workers, and clients.

**CTE/ADE 675
POSTSECONDARY TEACHING
PRACTICUM
3, 3/0**

Prerequisites: Graduate status, ADE 610 or CTE 536, and instructor permission.

Promotes expertise in teaching in human resource development adult education, workforce training, community colleges, and GED program settings. Extended teaching assignments with coach/mentor assistance. Seminar-type discussions reflecting on learning and development of learners as they taught, principles of teaching, their teaching behaviors, strategies promoting continuing growth as teachers. Analyze issues in teaching: diversity, technology, exceptionality, promoting social justice.

**CTE 690
MASTER'S PROJECT
3, 3/0**

Research or investigation of a particular problem, planned and carried out by the student and guided by the instructor.

**CTE 695
MASTER'S THESIS
6, 6/0**

Individual investigation of an original problem submitted in acceptable form according to directions given by the Graduate School. Problem and procedure must be approved by the student's graduate adviser, CTE advisory committee, and the department chair before the investigation begins.

DES

DESIGN Design Department

**DES 590
INDEPENDENT STUDY
3, 0/0**

**DES 592
INDEPENDENT STUDIO
IN DESIGN
3, 0/6; Offered by contract only.**

Independent studio experience with consultation, advice, and supervision from an instructor in a related area of study. Involves studio experiments and experiences not available in regular course offerings. May be taken up to three times.

**DES 640
GRADUATE STUDIO IN DESIGN
3, 0/6; Offered by contract only.**

Organization of space with a variety of materials; the designed form in theoretical, abstract, and functional applications. Tutorial relationship with instructor. Extra class assignments, including minimum studio hours equal to class hours. May be taken up to three times.

**DES 642
GRADUATE STUDIO IN
FURNITURE DESIGN
3, 0/6; Offered by contract only.**

Prerequisites: DES 250 and DES 351 or equivalent.

Designer-craftsperson approach to advanced projects in wood; hand, power, and machine tool practice; aesthetic and functional considerations in design; finishing methods; care of equipment. May be taken up to three times.

**DES 643
GRADUATE STUDIO IN
FIBER DESIGN
3, 0/6; Offered by contract only.**

Prerequisite: DES 242 or equivalent or instructor permission.

Advanced work in textile design, techniques, and processes: floor loom weaving, fabric printing, related techniques of fiber embellishment and construction; individual studies and projects exploring traditional and experimental concepts in fiber arts. Tutorial relationship with instructor when appropriate. May be taken up to three times.

**DES 646
GRADUATE STUDIO IN JEWELRY
3, 0/6; Offered by contract only.**

Prerequisite: DES 230 or equivalent.
Technical and aesthetic aspects of jewelry design and construction; advanced experience in fabrication techniques, casting, and stone setting according to student experience level. Tutorial relationship with instructor. Extra class assignments, including minimum studio hours equal to class hours. May be taken up to three times.

**DES 647
CASTING TECHNIQUES
IN JEWELRY
3, 0/6; Offered by contract only.**

Preparing wax models and molds, burning out, and lost-wax casting of jewelry in silver and gold; using the centrifugal casting machine; related steam casting, cuttlefish casting, open-mold casting, and associated techniques. Extra class assignments, including minimum studio hours equal to class hours. May be taken up to three times.

**DES 649
GRADUATE STUDIO IN CERAMICS
3, 0/6; Offered by contract only.**

Prerequisite: DES 320 or equivalent.
Advanced study on an individual basis: practice in throwing or hand building; study of form and texture for functional or sculptural applications; color and glaze. Extra class assignments, including minimum studio hours equal to class hours. May be taken up to three times.

**DES 690
MASTER'S PROJECT
3, 0/6; Offered by contract only.**

A study undertaken by one or more individuals on a problem of special interest aimed at making a special contribution to design, as contrasted with normal class or studio activity. May be presented, in part, as an exhibition of materials collected or prepared, including a major exhibition of design related to study, with theories and findings reported.

**DES 695
MASTER'S THESIS
6, 0/0; Offered by contract only.**

ECO

ECONOMICS Economics and Finance Department

**ECO 502
WORKSHOP IN ECONOMIC
EDUCATION
3, 3/0**

Prerequisite: Graduate status.
New trends in economic education; various models of participatory and active learning; examination of an economics curriculum; hands-on practice in applying computer-based and participatory pedagogical techniques in economics. Designed to aid teachers in developing pedagogical tools for enhancing education, especially at the

secondary level.

**ECO 505
HISTORY OF ECONOMIC
THOUGHT
3, 3/0**

Prerequisite: B.A./B.S. with background in economics or instructor permission; graduate students in other fields must have completed 6 credits in economic theory (micro- and macroeconomics).

The attempts of key economic thinkers from Aristotle to the present to analyze economic phenomena and to provide guidance for economic policy; history of methodology and methodological controversies in economics and their impact on the development of economic theory; study of the writings of the major economic theorists in their original published form.

**ECO 507
APPLIED MICROECONOMIC
THEORY
3, 3/0**

Prerequisite: B.A./B.S. with background in economics or instructor permission.

Microeconomic theories and their application to specific areas of economic analysis; regulatory and environmental policy; financial decision making; firms' response to uncertainty; consumer demand; microeconomic modeling; theories of the consumer and the firm; capital and labor markets; international trade; social welfare theory. Employs numerous analytical techniques in identifying the nature and scope of microeconomic problems and policy analysis. Students use the models developed in this course to understand real-world examples and learn how to apply economic theory in practice.

**ECO 508
APPLIED MACROECONOMIC
THEORY
3, 3/0**

Prerequisite: B.A./B.S. with background in economics or instructor permission.

Macroeconomic theories and their application to specific areas of economic analysis; financial forecasting and policy analysis in the public and private spheres; macroeconomic modeling; international and open-border macroeconomics; monetary and fiscal policy; labor market institutions; determination of wages and prices; interest, inflation, and exchange rates; income and output. Employs numerous analytical techniques in identifying the nature and scope of macroeconomic problems and in the analysis of macroeconomic policy. Students use the models developed in this course to understand real-world examples and learn how to apply economic theory in practice.

**ECO 510
ECONOMICS OF EDUCATION
3, 3/0**

Economic dimensions of education and the role of the education system in the economy; sources of school finance; education as an investment in human capital; economic implication of different education reform proposals; the school system as an influence on unemployment/employment patterns in the United States.

ECO 524
APPLIED ECONOMETRICS
3, 3/0

Prerequisite: B.A./B.S. with background in economics or instructor permission.
Statistical methods used in economic analysis by practitioners in government, business, finance, and the nonprofit sector; analysis and display of data using statistical and computer packages. Students will be able to employ statistics to solve practical problems and present data in a business or government setting.

ECO 590
INDEPENDENT STUDY
3, 0/0

ECO 600
LABOR ECONOMICS
3, 3/0

Prerequisite: One core course required for M.A. program or instructor permission.
Labor market theory, process, outcomes, and U.S. labor market policies; U.S. labor relations systems (labor unions, labor law, collective bargaining) compared with systems in other industrialized nations.

ECO 601
ENGINEERING ECONOMY
3, 3/0

Prerequisite: Graduate status.
Alternatives in processing, equipment selection, operation, and output compared with the various methods of production available currently or in the future.

ECO 612
URBAN ECONOMIC ANALYSIS
3, 3/0

Prerequisites: ECO 507 and ECO 508 or ECO 505 or ECO 524 or instructor permission.
Political economy of urban and community problems and policy: housing, poverty, environment; local government finance; strategies for the development of urban economies. Employs numerous analytical techniques in identifying the nature and scope of urban economic problems and analyzing urban policy.

ECO 650
PUBLIC FINANCE
3, 3/0

Prerequisites: ECO 507 and ECO 508 or ECO 505 or ECO 524 or instructor permission.
Mechanics and economic costs and benefits of different modalities of federal, state, and local government finance; evaluating government programs; incidence and burden of taxes and their growth and distributional effects.

ECO 660
COST-BENEFIT ANALYSIS
3, 3/0

Methods of estimating and comparing benefits and costs for the purpose of policy analysis and project evaluation in the public, private, and not-for-profit spheres. Topics include present-value calculations and estimating monetary values of nonmarketed, qualitative benefits and costs, such as health, education, environmental impact, recreation,

and quality of life.

ECO 690
MASTER'S PROJECT
3, 0/0

ECO 695
MASTER'S THESIS

EDC

EDUCATIONAL COMPUTING
Computer Information Systems Department

EDC 500
MICROCOMPUTER SYSTEMS
3, 3/0

Basic hardware components of a computer system; operating systems software; hands-on experience using common communications, word processing, spreadsheet and database software applications.

EDC 590
INDEPENDENT STUDY
3, 0/0

EDC 601
INSTRUCTIONAL TECHNOLOGIES
3, 3/0

Instructional uses of multimedia and the Internet; discussion of the hardware and software necessary for multimedia and Internet productions; integration of multimedia components into classroom instruction using presentation software and Web site development.

EDC 604
AUTHORING FOR EDUCATORS
3, 3/0

Prerequisite: EDC 601 or equivalent.
Authoring software; hardware and software necessary for multimedia productions; creating computer-aided instruction materials for use in classroom instruction; using an authoring package to create lessons utilizing this technology; creating Web sites.

EDC 672
THE MICROCOMPUTER IN THE INSTRUCTIONAL PROGRAM
3, 3/0

Increasing the effectiveness of instructional programs through the use of microcomputers: selecting microcomputer software; fulfilling the specific curricular needs of learners, and aiding the management of the instructional program.

EDC 690
MASTER'S PROJECT
3, 3/0

EDC 707
COMPUTER APPLICATIONS IN EDUCATION ADMINISTRATION
3, 3/0

Use of computer technology to make everyday administrative tasks in the school classroom and office more effective and efficient.

EDF

EDUCATIONAL FOUNDATIONS
Educational Foundations Department

EDF/EDL 500
MULTICULTURAL EDUCATION
3, 3/0

Cultural foundations of education; application of relevant findings of the social sciences to problems and issues of education in culturally plural (multiethnic) settings.

EDF 503
EDUCATION PSYCHOLOGY
3, 3/0

Theories of learning; history of educational psychology; measurements of learning; variables and their interpretation; application of learning theory to the teaching situation.

EDF 505
SIMULATED EDUCATIONAL AND SOCIAL SYSTEMS
3, 3/0

Performance practicum through simulations and educational games; study of contemporary school and society in its organizational characteristics, functions, values, and conflicts, including analyses of poverty, racism, ecology, social stratification, supply and demand, authority, and processes of change; theory, design, use, and evaluation of simulations and games for the elementary and secondary classroom.

EDF 520
EDUCATIONAL STATISTICS I (DESCRIPTIVE AND INFERENTIAL)
3, 3/0

Basic statistical concepts and their application to inferential statistics. Students develop a statistical frame of reference in dealing with educational and psychological problems.

EDF 521
BEHAVIOR AND DEVELOPMENT OF PREADOLESCENTS AND EARLY ADOLESCENTS
3, 3/0

Human behavior and development during the middle school and junior high school years; educational implications and applications to individual children.

EDF 525
PHILOSOPHY OF EDUCATION
3, 3/0

Prerequisite: EDU 410 or equivalent.
Principles underlying educational practices; changing concepts of education; education in a democratic society; teaching procedures as determined by a democratic concept of education.

EDF 526
SCHOOL COMMUNICATION AND PUBLIC INTERACTION
3, 3/0

Analysis and systematic study of the image, understanding, and support of education by the various constituencies—students, teaching and nonteaching staff, board of

education, individual citizens, pressure groups and organizations. Emphasizes effective school communication and positive public interaction.

EDF 528
HUMAN RELATIONS
3, 3/0

Intergroup problems relating to race, sex, religion, national origin, etc.; dividing and integrating factors affecting communications and understanding between individuals and within/between groups.

EDF 529
ADOLESCENT PSYCHOLOGY
3, 3/0

Characteristics and problems of adolescents; relationship of adolescent behavior to earlier development; special provisions of the early secondary school for this age group.

EDF 531
CHILD STUDY AND DEVELOPMENTAL DIAGNOSIS
3, 3/0

Basic and special approaches to studying human behavior and development; implications for teaching-learning processes and child guidance; effective individual and group diagnostic-prescriptive plans; child study techniques.

EDF 540
STUDIES IN HUMAN GROWTH AND DEVELOPMENT
3, 3/0

Research in child and adolescent growth; changing concepts in mental, emotional, social, and personality growth.

EDF 546
CHILD ABUSE AND NEGLECT: SCHOOL AND COMMUNITY COOPERATION
3, 0/0

Role of the teacher in relation to child abuse and neglect: nature and causation of abuse and neglect; workings of the current child protection system and the specific role of the teacher in that system; broader role of the school in remedying child maltreatment.

EDF 556
GROUP DYNAMICS IN EDUCATION
3, 3/0

Prerequisite: Instructor consultation recommended.
Theory and practice of group procedures in the school; development of understandings, skills, and attitudes conducive to successful group leadership and participation; group study and evaluation; experiential groups; the school group in its sociological, psychological, and philosophical setting.

EDF 590
INDEPENDENT STUDY
3, 0/0

EDF 602
MANAGEMENT: ADMINISTRATIVE BEHAVIOR
3, 0/3

Prerequisite: Graduate status.
Basic administrative theories; managerial

behavior as expressed through conceptual, human, and technical skills. Observation of field managers.

**EDF 603
HUMAN RESOURCE
MANAGEMENT**
3, 3/0

Personnel-related functions and the utilization of resources to support these functions within organizations: design of in-service training programs; supervisory skills for enhancing motivation and productivity; employee benefit packages; grievance and labor relations plans; proposals to obtain funding and training.

**EDF 610
PRINCIPLES OF OPEN EDUCATION**
3, 3/0

Analyses of open education movement and practices from perspectives of philosophical and sociological foundations of education; study of authors and classics in progressive education; identification of principles of educational and organizational theory in specific open education practices, including learning centers, individualization, testing and record keeping, and simulation and educational games; social implications of educational reform.

**EDF 611
EVALUATION IN EDUCATION**
3, 3/0

Background and current status of evaluation; principles, purposes, and procedures of evaluation; effective interpretation and use of evaluative data; methods of recording and reporting pupil progress.

**EDF 619
PARENT EDUCATION AND
COUNSELING**
3, 3/0

Parent education counseling approaches for schools and other settings: effective parent relations; fundamentals of effective parenting; parenting skills; program development and counseling procedures for various settings and populations; ways to involve parents in school/agency activities.

**EDF 630
SELF-PROCESSES IN HUMAN
DEVELOPMENT AND EDUCATION**
3, 3/0

Consideration of self-theories related to child and adolescent development; emphasis on educational implications. Exploration of self-technique applicable in child guidance and learning.

**EDF 641
SOCIAL FOUNDATIONS OF
EDUCATION**
3, 3/0

Relationships of school to society; contemporary social problems affecting education, social groups, and institutions; school and community relations; national, state, and community organizations affecting educational programs and the development of social understandings in pupils.

**EDF 645
SOCIAL INFLUENCES ON
TEACHING AND LEARNING**
3, 3/0

Application of sociological principles and approaches to teaching and learning; social perspectives on the family, school, pupil, and community.

**EDF 646
SEX EDUCATION AND
COUNSELING**
3, 3/0

Fundamentals of human sexuality throughout the life cycle; sex education methods and materials for various age groups and special populations; sex counseling strategies; parent-community involvement. Designed for teachers and other helping professionals.

**EDF/ADE 665
INSTRUCTIONAL DESIGN
AND ASSESSMENT**
3, 3/0

Prerequisite: Graduate status.

Designing instruction to achieve specific learning outcomes; systematic models that facilitate planning, developing, revising, and evaluating instruction; planning instruction that incorporates educational technology.

**EDF 682
HISTORICAL PERSPECTIVES IN
AMERICAN EDUCATION**
3, 3/0

Historical study of education in colonial America: European background; implications of the Revolutionary era. Exploration of students' interests within the field.

**EDF 685
SOCIAL PROCESSES IN HUMAN
DEVELOPMENT AND EDUCATION**
3, 3/0

Consideration of processes whereby human beings from infancy through adulthood internalize cultural values/patterns and adapt social roles/behaviors. Special emphasis on teaching/learning applications and basic approaches for guiding optimum social/moral development in educational settings; consideration of prevention, diagnosis, and treatment of social disabilities.

**EDF 686
SEMINAR IN INNER-CITY
EDUCATION**
3, 3/0

Nature and scope of education in the inner city: social research informing public policy on education of minorities; culture of minority children and the inner-city school; role of the teacher and the administrator; curriculum development and the needs of inner-city students; quest for educational equity; community/parent involvement.

**EDF/BUS 688
LEADERSHIP IN
ORGANIZATIONS**
3, 3/0

Prerequisite: EDF/BUS/PSY 715.

Theories of leadership; organizational contexts and culture for leadership; role of the leader in organizations; leadership competencies for organizational effectiveness; the leader's role in mentoring and coaching

for effective performance; leader's role in achievement of organizational mission and goals.

**EDF 689
METHODS AND TECHNIQUES OF
EDUCATIONAL RESEARCH**
3, 3/0

Background of educational research; selection and development of research problems; sources of information and data; methods, tools, and techniques; collection, treatment, application, and interpretation of research data; organizing and writing a research report.

**EDF 690
MASTER'S PROJECT**
3, 3/0

A study undertaken by one or more individuals on a problem of special interest submitted in acceptable form according to directions from the Educational Foundations Department.

**EDF 695
MASTER'S THESIS**
3, 0/0

An individual investigation of an original problem submitted in acceptable form according to directions given by the Graduate School.

**EDF 712
MANAGING PROGRAM
EVALUATION**
3, 3/0

Management and technical skills required for program evaluation in the public and private sectors; establishing evaluation standards and criteria; developing evaluation instruments and designs; statistical analysis of evaluation data; computer-based statistical analyses; report preparation and follow-up studies.

**EDF/BUS/PSY 715
MANAGEMENT PRACTICES AND
TECHNIQUES**
3, 3/0

Major management theories and factors affecting organizational systems; managing conflict and negotiating agreements; effective interpersonal skills for managers; defining problems and generating creative alternatives; types and sources of information needed by managers; relation of leadership style to staff productivity and development; relating effectively to upper-level management.

EDL

EDUCATIONAL LEADERSHIP Elementary Education and Reading Department

**EDL/EDF 500
MULTICULTURAL EDUCATION**
3, 3/0

Cultural foundations of education; application of relevant findings of the social sciences to problems and issues of education in culturally plural (multiethnic) settings.

**EDL 552
PUBLIC SCHOOL LAW**
3, 3/0

Foundations of public school law; legal problems arising out of the operation of the public school system; New York State education law; selected cases from state and federal courts; common law principles.

**EDL 559
PRINCIPLES OF CREATIVE
PROBLEM SOLVING**
3, 3/0

Research and development in the study of creative problem solving; practical application in a variety of contexts and disciplines. Students work alone and in subgroups on projects of direct concern to their educational or leadership efforts.

**EDL 560
METHODS, THEORIES, AND
MODELS OF CREATIVE LEARNING**
3, 3/0

Theory and research on the discipline of creative studies: developing awareness and understanding of basic principles and select definitions, models, and theories; practical application in a variety of contexts. Group interaction, discussion, and project work.

**EDL 590
INDEPENDENT STUDY**
3, 0/0

**EDL 597
SPECIAL TOPICS**
3, 0/0

**EDL 602
ADMINISTRATION OF SPECIAL
EDUCATION PROGRAMS**
3, 3/0

Aspects of educational leadership necessary to formulate, organize, implement, and evaluate high-quality public school programs and services for students with special needs.

**EDL 606
SCHOOL-COMMUNITY
RELATIONS**
3, 3/0

Educational relevance of involving the greater community (parents, neighborhoods, businesses, etc.) to enhance and support student achievement; organizational relationships between schools within and outside school districts; power; multicultural awareness; major opinion leaders; vision and mission articulation; interpersonal skills. Students construct a databased school-community relations plan.

**EDL 607
SITE-BASED LEADERSHIP**
3, 3/0

Principles of school administration and leadership; the changing role of site leadership as it relates to the dominant themes of leadership, change, shared decision making, school characteristics, standards-based education, and student achievement.

**EDL 608
ADMINISTRATION OF PROGRAMS
FOR THE YOUNG CHILD**
3, 3/0

Role of the administrator in developing an educational environment for young children:

organization, management, equipment, parent involvement, and curricular appropriate to the developmental needs of the young and his or her family.

**EDL 610
METHODS OF ADULT
EDUCATION**
3, 3/0

Principles, practices, evaluation, and practical application of adult learning across the full spectrum of settings in which adult education is conducted.

**EDL 612
SCHOOL BUSINESS MANAGE-
MENT AND FINANCE**
3, 3/0

School district business management functions and financing; accounting, reporting, and auditing; program budgeting systems; investments and debt service; purchasing, inventory, and insurance; sources of income; Civil Service law and personnel; collective negotiations; auxiliary services.

**EDL 630
CURRICULUM LEADERSHIP**
3, 3/0

Educational leader's role in the design, implementation, and evaluation of curriculum, focusing on the principles of curriculum leadership; needs assessment, school improvement, curriculum alignment, and evaluation; leadership roles in curricular decision making are examined in relationship to current research.

**EDL 631
SUPERVISION OF TEACHING**
3, 3/0

Principles of supervision: classroom observation; evaluating teaching; effect of teachers' purposes and research on choice of subject matter and teaching procedures; teacher-pupil relationships; group and individual conferences; induction of new teachers; intervisitation; demonstration teaching; teachers' meetings; bulletins; workshops; evaluation of programs.

**EDL/EDU 640
CONFLICT RESOLUTION AND
PEACEABLE SCHOOLS**
3, 3/0

Conflict resolution in the public school context; foundations of peacemaking; emotional intelligence; teaching tolerance; cooperative learning. Presents a model for incorporating peaceable schools curricula into existing school programs.

**EDL 652
SPECIAL EDUCATION LAW**
3, 3/0; Offered by contract only.

Laws, regulations, policy, and court cases influencing special education; due process and equal protection guarantees; Individualized Education Plan (IEP) development; Individuals with Disabilities Education Act (IDEA); Section 504 of the Rehabilitation Act of 1973.

**EDL 683
FACILITATION OF GROUP
PROBLEM SOLVING**
3, 3/0

Prerequisite: EDL/CRS 559.
Investigation of problems in cultivating

creative behavior; advanced supervised practice in utilization of effective methods/techniques for nurturing creative problem solving; difficulties encountered by facilitation in a variety of group settings; skills that enable learners to develop into leaders.

**EDL 686
SEMINAR IN INNER-CITY
EDUCATION**
3, 3/0; Offered by contract only.

Nature and scope of education in the inner city; social research informing public policy on education of minorities; culture of minority children and the inner-city school; roles of the teacher and the administrator; curriculum development and the needs of inner-city students; quest for educational equity; community/parent involvement.

**EDL 702
EDUCATIONAL LEADERSHIP
FIELD EXPERIENCES**
1, 0/0

A sequence of three 1-credit courses (upon entry into the EDL program, students are required to register for EDL 702 for three terms) designed to engage students in field experiences from the time they enter the EDL/C.A.S. program. Common core field experiences, Saturday sessions, student teacher supervision, and special involvement days. Students receive a grade upon completion of each field experience.

**EDL 703
EDUCATIONAL LEADERSHIP
INTERNSHIP**
3, 3/0

An ongoing experience in three different pre-K–12 or community education locations and with three different field supervisors. Internship/field experiences commonly begin in the student's school/district and include two summer experiences: one in a central office, the other in a school when students are in session (e.g., summer school). Students are encouraged to complete one internship in an urban school district and at least one internship in a nonurban setting. Fall or spring terms do not have stated hour requirements. The entire internship, field experiences (EDL 702), and common core experiences should total 1,300 hours. Students enroll in EDL 703 at the end of their program, preferably after 24 credit hours have been completed. Students are encouraged to begin field and internship experiences upon admission to the program. Confer with the program adviser for details.

**EDL 704
SEMINAR IN EDUCATIONAL
CHANGE**
3, 3/0

Issues in pre-K–12 educational leadership, change, and policy; functions of theories, practices, and philosophies in problem solving, decision making, group collaboration, and facilitation. Site-based action research project required.

**EDL 706
PROBLEMS IN LEADERSHIP**
3, 0/0

Problems and solutions in educational leadership, organizational change, human resource development, and school-community relations.

**EDL 707
COMPUTER APPLICATIONS IN
EDUCATION ADMINISTRATION**
3, 3/0

Recent advances in cybernetic systems as effective tools to improve instruction, organization, and administration of education. Laboratory experiences emphasize effective use of data-processing systems rather than technical aspects of programming.

**EDL 714
PERSONNEL ADMINISTRATION
IN SCHOOLS**
3, 3/0; Offered by contract only.

Concepts of human resource administration and problems related to personnel programs, policies, and procedures; related goals of organization and management to goals and welfare of staff members.

**EDL 715
SCHOOL ADMINISTRATION
AND RESEARCH**
3, 3/0; Offered by contract only.

A study of research as applied to school administration; major sources and review of research; individual project and administrative problem solving; proposal writing and administration.

**EDL 735
ADMINISTRATORS AND THE
READING PROGRAM**
3, 3/0

Role of the educational leader in the development and implementation of total school reading programs; elements needed in effective reading programs; evaluation of reading programs and reading instruction; relationship of the administrator to reading personnel; role of reading personnel; staff development as part of reading programs; the reading program and public relations; research related to reading program development and instruction. Designed for practicing school administrators and supervisors, and for students enrolled in the C.A.S. educational leadership program

EDU

EDUCATION Elementary Education and Reading Department

**EDU 501
SEMINAR FOR THE REFLECTIVE
TEACHER**
3, 3/0

Critical reading and interpretation of educational research literature; synthesis and assessment of educational research literature as related to the enhancement of teaching and learning processes and experiences of elementary teachers. Participants reflect on ways to investigate and improve their own practice.

**EDU/CRS 509
THE GIFTED INDIVIDUAL**
3, 3/0

Introduction to the giftedness, talent development, and creativity in students. Examines

characteristics of academically gifted, creative, and talented students who learn at a pace and level that are significantly different than classmates, and the role of creativity in education and issues of meeting the needs of a variety of populations of gifted students from diverse backgrounds and areas of abilities. Overview of the present and past state of education for these students, and the knowledge of tools and methods for identification of these students as part of a total school program.

**EDU 511
METHODS OF TEACHING
ENGLISH LANGUAGE ARTS**
6, 6/0

Building methodological practice from the theoretical scaffold of literacy knowledge and teaching. Students participate in classroom practice for at least 40 hours while exploring in-depth curricular, theoretical, and practical educational frameworks. Participants learn and practice the pedagogy required for teaching language arts across the curriculum; plan, implement, and evaluate lessons incorporating the New York State standards for English language arts; practice and evaluate assessment tools and processes; become reflective practitioners; and demonstrate effective techniques for instructional organization.

**EDU 513
SURVEY OF BASIC CONCEPTS
OF ELEMENTARY READING
INSTRUCTION**
3, 3/0

Review of the research and literature pertaining to the basic concepts underlying reading methods, materials, testing devices, and management programs; the reading process from readiness for reading to mature, effective reading skill. Designed for either large or small group instruction.

**EDU 524
TRENDS IN EARLY CHILDHOOD
EDUCATION**
0, 3/0

Implications of recent research on cognition and socialization during infancy and early childhood for quality care in education programs.

**EDU 528
FAMILIES AND EARLY CHILDHOOD
PROGRAMS**
3, 3/0

Emphasis on building partnerships with families in the changing context of society. Examination of model family involvement programs; working with families in poverty; integrating an antibias curriculum; active strategies for implementing formal and informal communication in the school setting.

**EDU 534
THE HOLISTIC CURRICULUM:
TEACHING TO BOTH SIDES OF
THE BRAIN**
3, 3/0

Paradigm of teaching and learning based on current neuroscience research in brain function: learning styles, memory, discipline, student motivation, attention, retention of

new material. An eclectic instructional approach that encourages direct involvement and models many of the brain-compatible techniques promulgated in the theory.

**EDU 535
TEACHING WRITING IN THE
ELEMENTARY SCHOOL**
3, 3/0

A student-centered, process approach to teaching writing in the elementary school, based on the premise that children need to write and, in appropriate settings, like to write. Focuses on the personal writing of participants, as well as on instructional strategies for the classroom; the writing process; the relationship between reading and writing; conferencing; classroom management; evaluation; writing across all areas of the elementary school curriculum.

**EDU 543
CURRICULUM FOR THE YOUNG
CHILD**
3, 3/0

Introduction to the profession of early childhood education. Identification and examination of appropriate curriculum, environments, materials, teaching strategies, and assessments for working with young children preschool through third grade.

**EDU 546
IMPROVEMENT OF INSTRUCTION
IN LANGUAGE ARTS**
3, 3/0

Major aspects of the elementary language arts program: working with children; knowledge of research literature.

**EDU 552
PUBLIC SCHOOL LAW**
3, 3/0; Offered by contract only.

Foundations of public school law; legal problems arising out of the operation of the public system; New York State education law; selected cases from state and federal courts; common law principles.

**EDU 554
SOCIAL STUDIES IN THE
ELEMENTARY SCHOOL**
3, 3/0

Goals in elementary social studies and their relationships to organizational concerns, approaches, methods, techniques, media, and evaluation; review and development of appropriate research for application to elementary social studies teaching.

**EDU 574
THE ELEMENTARY SCHOOL
CURRICULUM**
3, 3/0

Review of learning processes and purposes of the elementary school; curriculum development; types of curriculum organization; instructional strategies; materials; community resources; individual differences.

**EDU 577
TEACHING INDIVIDUALS WITH
EXCEPTIONALITIES IN THE
REGULAR CLASSROOM**
3, 3/0

Human behavior and development during

infancy and early childhood periods; educational implications for early childhood educators and childhood development specialists.

**EDU 581
ENHANCING AND INTEGRATING
ELEMENTARY SCHOOL SCIENCE
INSTRUCTION**
3, 3/0

Planning, implementing, and assessing hands-on elementary science programs; integration of science with other elementary curricular areas.

**EDU/ADE 584
LITERACY SKILLS AND THE ADULT
LEARNER**
3, 3/0

Theories, practice, curricula, and content of instruction appropriate for adult learners; the theories of Paulo Freire, Ira Shor, and Henry Giroux; collaborative participation in the design and implementation of an action research project focusing on adult literacy.

**EDU 590
INDEPENDENT STUDY**
3, 0/0

Consult the Independent Study section of this graduate catalog for a description of how independent study can be initiated by a student, and for the requirements and regulations.

**EDU 604
INSTRUCTIONAL STRATEGIES FOR
MORE EFFECTIVE TEACHING**
3, 3/0; Offered by contract only.

Prerequisite: One curriculum course. Strategies for improving instruction through informed decision making, with particular emphasis on the essential elements of instruction developed by Madeline Hunter; the theoretical framework on which the Hunter model was based and its practical application in the classroom setting.

**EDU 606
LITERACY INSTRUCTION FOR
LINGUISTICALLY DIVERSE
STUDENTS**
3, 3/0

Prerequisite: EDU 513 or equivalent. Supporting literacy instruction for linguistically diverse learners: literacy learning and culture; dialects and second-language development; a model for effective instruction based on best-practices research for application in mainstream classrooms.

**EDU 609
IMPROVING READING IN THE
CONTENT AREAS**
3, 3/0

Practical strategies to help intermediate- and secondary-level students successfully use reading in their content area studies; the reading process; student motivation; developing comprehension and thinking skills; developing meaningful vocabulary; evaluation and assessment. Emphasizes using the ideas of the subject matter as the departure point for designing teaching methods and materials.

**EDU 611
TEACHING LITERACY IN THE
PRIMARY GRADES**
3, 3/0

Implications of research in early literacy; factors influencing early success in reading and writing; process vs. product instruction; emergent literacy instruction; building a support system; focusing on print; developing decoding and comprehension strategies; appreciating effects of special needs and individualizing instruction for such needs; planning, organizing, and managing a program; assessing growth and needs.

**EDU 612
DEVELOPING LITERACY
THROUGH LITERATURE**
3, 3/0

Implications of research and practice in the areas of correlating reading/writing instruction with children's literature; choosing appropriate methodology; familiarity with genre and instructional elements; multiple-word identification, comprehension, and writing strategies; integrating literature across the curriculum; organizing and managing a program; assessing growth and needs; involving parents.

**EDU 613
ASSESSMENT OF ENGLISH
LANGUAGE ARTS FOR THE
CLASSROOM TEACHER**
3, 3/0

Prerequisites: EDU 513 plus one of the following: EDU 535, EDU 546, or any additional graduate-level course with reading or language arts content. A diagnostic-prescriptive approach to developmental reading; analysis of reading success and causes of reading failure; strategies for identifying disabled, average, and gifted readers and students who require a modified reading program; materials and teaching skills for working with each of these classes of readers to individualize reading instruction; standardized, informal, and criterion-referenced tests; utilization of case studies and reports provided by supportive personnel; procedures for student referral; preparation of case summaries; reporting to parents.

**EDU 615
APPLYING PSYCHOLOGY TO THE
TEACHING OF READING**
3, 3/0

Prerequisite: EDU 513 or equivalent. Theories of learning and psycholinguistics as they apply to the teaching of reading; theories of language and language acquisition; learning theories related to learning to read, especially as related to readiness, attention, retention, and extinction; transfer and practice; personality factors that affect reading.

**EDU 616
INTEGRATING THEORY AND
PRACTICE IN PROGRAMS FOR
INFANTS AND TODDLERS**
3, 3/0

Prerequisites: Admission to early childhood education program and EDU 543. Theoretical basis of early care and education for infants and toddlers. Examination of key issues in establishing appropriate care and learning environments, research-based caregiving strategies, appropriate curriculum

and assessments, and cultural issues affecting group care. Clinical fieldwork required.

**EDU 620
TEACHING AND LEARNING IN
DIVERSE ELEMENTARY SCHOOL
CLASSROOMS**
3, 3/0

Prerequisite: EDU 501. Culturally sensitive pedagogy and research relative to effective teaching and learning for diverse student populations: collaborating with parents; developing a community of learners; consideration of culture, power, and clan; cooperative learning in culturally diverse classrooms; contextual teaching and learning.

**EDU 626
INTEGRATING THE CONTENT
AREAS IN THE TEACHING OF
YOUNG CHILDREN**
3, 3/0

Prerequisite: EDU 543. Appropriate content in the teaching of science, mathematics, social studies, and the creative arts. Theory and practice of inquiry-based instruction, emphasizing the project approach. Focus on teaching young children pre-K through third grade. Fieldwork required in a pre-K, kindergarten, first grade or second grade classroom.

**EDU/EDL 640
CONFLICT RESOLUTION AND
PEACEABLE SCHOOLS**
3, 3/0

Conflict resolution in the public school context; foundations of peacemaking; emotional intelligence; teaching tolerance; cooperative learning. Presents a model for incorporating peaceable schools curricula into existing school programs.

**EDU 642
READING ASSESSMENT
AND EVALUATION**
3, 3/0

Prerequisites: EDU 513 or equivalent and instructor permission. Must have completed at least 15 credit hours in program. Causes and correlates of reading difficulty; principles of diagnosis; diagnostic techniques and instruments; diagnostic teaching; communicating with children, parents, and professionals. The first course in the clinical and remedial sequence for students in the reading teacher certification program. Fall only.

**EDU 643
TEACHING STRATEGIES FOR
CHILDREN WITH READING
DIFFICULTIES**
3, 3/0

Prerequisites: EDU 642 and instructor permission. Planning and implementing instructional programs for children with reading difficulties; principles of remedial reading; methods and materials for remedial instruction; working with parents of children with reading problems; effective report writing. Under clinical supervision, students apply appropriate teaching techniques with children referred to the Literacy Center and write a summary report for the child's school and parents. Spring only.

EDU 645
TEACHING STRATEGIES FOR
ADOLESCENTS WITH READING
DIFFICULTIES
3, 3/0

Prerequisites: EDU 642 and instructor permission.

Planning and implementing instructional programs for adolescents with reading and writing difficulties: principles of diagnostic teaching; methods and materials for remedial instruction; working with parents and colleagues; effective report writing. Students apply teaching techniques with adolescents exhibiting reading and/or writing difficulties and write a report for the children's school and parents. Spring only.

EDU 647
PRACTICUM IN READING
6, 6/0

Prerequisites: EDU 643 or EDU 645 and instructor permission, normally one semester prior to registration. Must have completed 27 credit hours in program.

Integration of theoretical and practical aspects of the reading program in a supervised clinical setting. Students function as members of the Literacy Center staff and are required to develop, implement, and evaluate diagnostic and remedial reading programs for children referred to the Reading Center. Written reports are prepared for the parents and schools of the children serviced in the Literacy Center. Summer only.

EDU 649
ADVANCED PRACTICUM IN
READING
3, 3/0

Prerequisites: EDU 647 and instructor permission.

Further integration of theoretical and practical aspects of the reading/writing program in a supervised clinical setting. Students extend their clinical experience to pupils at a different age level, younger or older, than those in EDU 647. Students develop, implement, and evaluate diagnostic and remedial reading/writing programs for pupils referred to the Literacy Center.

EDU 651
IMPROVING MATHEMATICS IN THE
ELEMENTARY SCHOOL
3, 3/0

Modes of instruction; development of diagnostic skills; needs of slow and rapid learners; selection and use of appropriate teaching materials in elementary school mathematics programs.

EDU 655
TEACHING OF READING:
GRADUATE SEMINAR
3, 3/0

Prerequisites: EDU 647 and instructor permission.

Literacy specialist majors identify important aspects in the field that they feel need further critical review and deliberative discussion. Students and instructor jointly identify course topics, review current research and literature, conduct action research and exchange findings through a variety of formal and informal presentations. Fall only.

EDU 670
PRINCIPLES OF CURRICULUM
DESIGN
3, 3/0

Basic principles of curriculum design; sources of curricula and factors that influence curricular decisions; curricular thinking of experts in the field; multiple dimensions in curriculum decision making.

EDU 671
CONSTRUCTING SCIENCE
UNDERSTANDING IN AN ELEMEN-
TARY CLASSROOM
3, 3/0

Construction of science ideas in informal and formal social settings; demonstration and evaluation of exemplary science teaching methods; research focusing on elementary students' formal and naive science understanding.

EDU 672
THE MICROCOMPUTER IN THE
INSTRUCTIONAL PROGRAM
3, 3/0

Application and integration of microcomputers in the instructional program; proficiency in the educational uses of microcomputers; tool-based software use; software evaluation; curricular integration; educational skill; process enhancement through microcomputers; communication tools; professional development; the Internet and electronic mail; issues and ethics surrounding technology in schools; lesson and unit design incorporating computer applications; technology for students with disabilities.

EDU 682
ENHANCING AND INTEGRATING
ELEMENTARY SOCIAL STUDIES,
SCIENCE, AND MATHEMATICS
6, 6/0

Designed for those seeking certification in childhood education. Research and field experience investigating the connections between theory and practice in selecting, organizing, and presenting elementary school science, mathematics, and social studies materials and evaluating pupil progress. Students exhibit the characteristics of reflective practitioners and teachers as researchers.

EDU 690
MASTER'S PROJECT
3, 3/0

Prerequisites: EDU 501, EDF 689, and minimum 24 hours of graduate-level coursework.

Builds on foundations constructed in EDF 689 and EDU 501. Production of a curriculum or research-based project in a topic of special interest to the student; project must be approved by the instructor prior to execution. The final product must follow APA guidelines in its written form. Oral presentation required.

EDU 734
SUPERVISION OF READING
INSTRUCTION
3, 3/0

Prerequisites: EDU 647 and formal application to the Literacy Center director.

Students are designated Literacy Center supervisors and function as staff members of the Literacy Center, supervising literacy teachers as they plan and implement literacy

programs for pupils with mild to severe literacy problems. Students work with resident literacy faculty and with students taking EDU 642 or EDU 645, reviewing and evaluating case studies, plans for remediation, and final reports to schools and parents. Designed for advanced graduate students specializing in clinic and remedial reading.

ENG

ENGLISH

English Department

**Courses marked with an asterisk may be taken more than once, on advisement, with different subject matter.*

ENG 524
ENGLISH INSTRUCTION AT THE
SECONDARY LEVEL
1, 3/0

Prerequisites: Graduate status; exceptional education major.

An overview of the content, teaching methods, activities, and evaluation procedures typically used in English instruction at the secondary level.

ENG 590
INDEPENDENT STUDY
3, 0/0

ENG 601
RESEARCH IN LITERATURE AND
LANGUAGE
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Theory and practice in methods of research essential to the historical and critical analysis of literature. Should be taken early as a basis for other courses.

***ENG 610**
MEDIEVAL ENGLISH LITERATURE
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Selected writers, forms, movements, and theoretical approaches.

***ENG 613**
SEVENTEENTH-CENTURY ENGLISH
LITERATURE
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Selected writers, forms, movements, and theoretical approaches.

***ENG 614**
EIGHTEENTH-CENTURY ENGLISH
LITERATURE
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Selected writers, forms, movements, and theoretical approaches.

***ENG 615**
NINETEENTH-CENTURY ENGLISH
LITERATURE
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Selected writers, forms, movements, and theoretical approaches.

***ENG 619**
TWENTIETH-CENTURY ENGLISH
LITERATURE
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Selected writers, forms, movements, and theoretical approaches.

ENG 620
IRISH LITERATURE
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Major writers, schools, and traditions.

***ENG 621**
AMERICAN LITERATURE
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Selected periods, writers, forms, movements, and theoretical approaches.

***ENG 623**
LITERATURE OF CONTINENTAL
EUROPE
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Selected periods, writers, forms, movements, and theoretical approaches.

ENG 630
CHAUCER
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Selections from the major and minor works.

***ENG 631**
SHAKESPEARE
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

One aspect of Shakespeare's work (e.g., the comedies or the tragedies).

ENG 635
MILTON
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Selected poetry and prose.

***ENG 638**
STUDIES IN INDIVIDUAL WRITERS
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

In-depth study of one writer, or a limited combination of writers, from English, American, or other literature.

***ENG 641**
STUDIES IN THE NOVEL
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Major writers or movements or other topics in the form.

***ENG 642**
STUDIES IN POETRY
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Important writers or schools.

***ENG 643**
STUDIES IN DRAMA
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Dramatists or schools of drama (e.g., Renaissance, modern European).

***ENG 644**
IDEOLOGY AND LITERATURE
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

The study of literature from a major modern perspective. Topics in the ideological analysis of literature (e.g., the Emersonian influence, individualism, colonialism, and postcolonialism).

ENG 645
LITERATURE AND SOCIAL JUSTICE
3, 3/0

Prerequisite: Current M.A. or M.S. in English/English education candidate.

The study of the intersection between literature and social justice movements throughout the world; examination of modes of literary presentation for social justice discourse.

ENG 652
LITERARY CRITICISM
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Modern theoretical approaches to literature and its social, political, and ideological contexts.

ENG 660
CHILDREN'S LITERATURE
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Selected topic (e.g., a survey of types and resources, classic children's literature, fantasy, realism).

ENG 670
ADVANCED LINGUISTICS
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Selected topic (e.g., applied linguistics, social or regional dialectology, English as a second language, grammar, aspects of the history of the English language, languages of the world).

ENG 690
MASTER'S PROJECT
3, 3/0

Prerequisite: M.A. or M.S. in English candidate.

Student's accumulated skills brought to focus in individual study with faculty member's approval and guidance. Investigation of a particular problem related to literature, the teaching of literature, or the English language arts resulting in a written, research-based paper.

ENG 691
ADVANCED STUDY IN THE TEACHING OF ENGLISH
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Advanced course in the teaching of English language arts (middle school through senior high) that includes methods and materials for teaching literature, language, and writing, with emphasis on the integration of the language arts; explores current theory and research in the content, methods, materials and evaluation of English.

ENG 692
THE TEACHING OF WRITING
3, 3/0

Prerequisite: One course in advanced writing, creative writing, or journalism or instructor permission.

Advanced course in the teaching of writing discussing the philosophical, psychological, and sociological foundations needed to teach writing; the relation of forms of thinking, rhetoric, and communication theory to writing; the management of a writing program; introduction to research in the teaching of writing.

ENG 693
RESEARCH IN THE TEACHING OF ENGLISH
3, 3/0

Prerequisite: Admittance to the M.S. program in secondary English.

Introduction to research and research methodology. Students write a project or thesis proposal as part of class activities.

ENG 694
TEACHING LITERATURE
3, 3/0

Prerequisites: Graduate status; English or English education major or appropriate premajor.

Intensive study of the theoretical and pragmatic concerns of developing a response-based, student-centered literature classroom. Students explore different types of literature and critical perspectives, and apply this knowledge in the creation of lessons and in teaching sessions.

ENG 695
MASTER'S THESIS
3-6, 3-6/0

Prerequisite: M.A. or M.S. in English candidate.

Student's accumulated skills brought to focus in individual research with a faculty member's approval and guidance. An original inquiry into a literary question (writer, theme, ideology, etc.), or a linguistic or critical question resulting in an essay of 40-60 pages.

EXE

EXCEPTIONAL EDUCATION Exceptional Education Department

EXE 500
INDIVIDUALS WITH SPECIAL NEEDS
3, 3/0

Traditional and evolving concepts of exceptionalities; characteristics of individuals with exceptionalities; implications for schools and society.

EXE 501
EDUCATIONAL ASSESSMENT TECHNIQUES FOR SPECIAL EDUCATION
3, 3/0

Prerequisite: EXE 500 or equivalent.
Educational assessment used with individuals with disabilities: purposes, models, practices, and issues. Students design tests and collect and interpret data regarding particular educational decisions.

EXE 502
CONTINGENCY MANAGEMENT
3, 3/0

Procedures and strategies for managing the behavior of students with special needs in educational settings; prevention of undesirable classroom behavior; assessment and remediation of behavior problems; effective delivery of instruction.

EXE 503
INSTRUCTIONAL STRATEGIES FOR INDIVIDUALS WITH MILD DISABILITIES
3, 3/0

Prerequisite: EXE 500 or equivalent.
Basic curricular concepts and teaching practices related to the development and implementation of effective instructional programs for students with mild disabilities.

EXE 504
GRADUATE PRACTICUM IN SPECIAL EDUCATION
6, 6/0

Prerequisites: EXE 500 or equivalent; EXE 501 or equivalent; EXE 502 or equivalent; EXE 503 or equivalent; minimum cumulative GPA of 3.0 in prerequisite coursework; program coordinator permission.

A 10-week graduate student teaching experience (unpaid) with individuals needing special education services, completed in public school classrooms, private agency

classrooms, or classrooms in residential settings. Required for graduate students seeking certification as a teacher of special education.

EXE 510
COGNITION AND EMERGENT LITERACY IN YOUNG CHILDREN WITH DISABILITIES
3, 3/0

Prerequisite: EXE 500.

Cognitive and active learning, problem-solving skills, and academic readiness in young children with disabilities; encouraging development of literacy in young children with disabilities.

EXE 518
INDIVIDUALS WITH PHYSICAL DISABILITIES
3, 3/0

Prerequisite: Provisional/initial certification in special education or EXE 504.

Medical, educational, and psychological implications of selected physical disabilities; characteristics of various types of physical disabilities and health impairments; social, psychological, and environmental factors that relate to functioning and independence of individuals with physical disabilities.

EXE 530
PARENT AND FAMILY INVOLVEMENT IN SPECIAL EDUCATION PROGRAMS
3, 3/0

Prerequisite: Provisional/initial certification in special education or EXE 504.

Research on parent and family reactions and needs in regard to the family member with a disability; communication skills for collaborative work with parents.

EXE 534
UNDERSTANDING STUDENTS WITH BEHAVIOR PROBLEMS IN THE CLASSROOM
3, 3/0

Prerequisite: Provisional/initial certification in special education or EXE 504.

Personal, social, and emotional factors related to individuals with behavioral and emotional disorders in an educational setting; methods of identification, assessment, and instructional planning.

EXE 544
MODELS OF CLASSROOM DISCIPLINE FOR STUDENTS WITH DISABILITIES
3, 3/0

Prerequisite: EXE 500 or equivalent.

Comprehensive coverage of a variety of models of discipline; building systems and conceptual models of total discipline that match the needs and personalities of students and are compatible with instructors' needs; discipline through activities that promote pupil motivation and classroom management.

EXE 577
TEACHING INDIVIDUALS WITH EXCEPTIONALITIES IN THE REGULAR CLASSROOM
3, 3/0

Prerequisite: EXE 500 or equivalent or instructor permission.

Characteristics of individuals with disabilities; adaptation of regular class curricula to meet

their needs; strategies for observation, motivation, behavior management, and individualization of instruction. May not be used toward special education certification or the master's degree in special education.

**EXE 590
INDEPENDENT STUDY**
3, 3/0

**EXE 612
MANAGING THE BEHAVIOR OF
YOUNG CHILDREN WITH
DISABILITIES**
3, 3/0

Prerequisite: EXE 502.

A framework for guiding social-emotional development and responsible behavior in young children: matching the child's current social, emotional, and behavioral status with specific goals and objectives; behavior management strategies; curriculum materials, activities, and evaluation procedures.

**EXE 620
CURRICULUM FOR INDIVIDUALS
WITH MODERATE AND SEVERE
DISABILITIES**
3, 3/0

Prerequisite: EXE 500 or equivalent.

Characteristics and needs of individuals with moderate and severe disabilities and their families; methods to teach and support those individuals and families.

**EXE 627
TRANSITION FROM SCHOOL TO
ADULT COMMUNITY LIFE**
3, 3/0

Prerequisite: EXE 504 or equivalent.

Strategies for planning and implementing career education curricula in secondary and postsecondary programs; transitioning students with disabilities from school programs to satisfying adult lives in the community, including supported and nonsupported competitive employment.

**EXE 628
COLLABORATION AND CONSUL-
TATIVE PRACTICES IN INCLUSIVE
SETTINGS**
3, 3/0

Prerequisite: EXE 504 or completion of the requirements for provisional/initial certification as a special education teacher and successful completion of at least one advanced curriculum class in the Exceptional Education Department.

Skills needed to collaborate as consultants: role and responsibilities of the consultant teacher; development of strategies for enhancing effectiveness of collaborative efforts on behalf of students with special needs, their families, and their general education teachers.

**EXE 631
ADAPTING LANGUAGE ARTS AND
READING INSTRUCTION FOR
STUDENTS WITH MILD
DISABILITIES**
3, 3/0

Prerequisites: Provisional/initial certification in elementary or special education and EDU 513 or equivalent.

Designed to help special education teachers teach language arts and reading to students

with special needs at the elementary and middle school levels: effective collaboration with elementary teachers, remedial teachers, and parents to promote the establishment of literate environments at home and school for students with special needs; effective use of technology as a tool of literacy learning and instruction.

**EXE 632
DIRECT INSTRUCTION INTERVEN-
TION MODELS FOR STUDENTS
WITH SPECIAL NEEDS**
3, 3/0

Prerequisites: Provisional/initial certification in elementary or special education and EXE 631 or equivalent.

Current range of instructional and adaptive technologies; factors relating to curricular integration of technology within the general and special education classroom; hands-on experience with the use of instructional software, Web sites, and adaptive/assertive technology.

**EXE 633
ADAPTING CONTENT AREA
INSTRUCTION FOR CHILDREN
AND ADOLESCENTS WITH
DISABILITIES**
3, 3/0

Prerequisite: Provisional/initial certification in elementary or special education. Content area adaptations for children and adolescents with disabilities; instructional planning, delivery, and assessment.

**EXE 634
APPLIED BEHAVIOR ANALYSIS**
3, 3/0

Prerequisite: EXE 504 or equivalent.

Applied behavior analysis in the education of students with moderate and severe disabilities: principles and procedures for reinforcing existing behaviors, teaching new behaviors; evaluating progress through use of student performance data; contingency management procedures for including individuals with moderate and severe disabilities in regular education settings.

**EXE 636
PROMOTING EFFECTIVE SOCIAL
INTERACTIONS IN THE SCHOOLS**
3, 3/0

Prerequisite: Certification in elementary or special education.

Skills needed to enhance the quantity and quality of interactions enjoyed by students with disabilities: curricular and instructional approaches that may be used to teach social skills, including those related to sexuality issues, so that students with disabilities can exhibit self-enhancing behaviors in response to societal attitudes and actions as represented by educational and community settings. Addresses ways in which participants can increase the effectiveness of their own interactions with members of the educational community.

**EXE 642
CURRICULUM FOR INDIVIDUALS
WITH MODERATE AND SEVERE
DISABILITIES II**
3, 3/0

Prerequisite: EXE 620 or equivalent.

Continuation of EXE 620. Age-appropriate curriculum content for students with

moderate, severe, profound, and multiple disabilities; emphasizes curriculum content and instruction that is functional and age-appropriate, with instruction provided for same-age nondisabled peers in general education settings, the student's home school building, and home community. Topics include specific curriculum areas that relate to students with moderate, severe, profound, and multiple disabilities; interpreting the literature in relation to instructional configurations; and identifying curriculum content and providing meaningful instruction.

**EXE 644
ADVANCED BEHAVIOR ANALYSIS
FOR CHALLENGING BEHAVIORS**
3, 3/0

Prerequisites: EXE 504 or equivalent, EXE 620, and EXE 634.

Specific strategies and techniques for the analysis, treatment, and evaluation of serious behavior problems in individuals with disabilities; facilitation of generalization of student performance; appropriate research designs in applied behavior analysis.

**EXE 650
ASSESSMENT OF YOUNG
CHILDREN WITH DISABILITIES**
3, 3/0

Prerequisite: Provisional/initial certification in special education or EXE 504, PSY 415, PSY 417, or EDU 405, or equivalent infancy course approved by adviser.

Research-based, theoretical, and practical applications of educational assessment of infants and preschoolers with disabilities or with conditions that place them at risk for becoming disabled; procedures and utility of norm-referenced, criterion-referenced, and multidimensional behavioral assessment strategies empirically validated with young children with disabilities.

**EXE 652
EDUCATIONAL INTERVENTION
FOR YOUNG CHILDREN WITH
DISABILITIES**
3, 3/0

Prerequisite: EXE 650 or instructor permission.

Empirically validated and practical educational interventions with infants and preschoolers with disabilities or with conditions that place them at risk for becoming disabled; best-practice intervention methods across relevant curricular domains; organizational strategies for use in center- and home-based programs for infants/preschoolers with special needs.

**EXE 660
EFFECTIVE INTERPERSONAL
INTERACTIONS IN SPECIAL
EDUCATION ENVIRONMENTS**
3, 3/0

Prerequisite: Minimum of 12 hours of graduate study in exceptional education.

Knowledge, skills, and behaviors affecting interactions with others across settings serving individuals with disabilities. Emphasis on immediate application and practice. Activities involving group interaction and professional self-evaluation.

**EXE 682
INSTRUCTIONAL FIELD EXPERI-
ENCE IN SPECIAL EDUCATION**
3, 3/0

Prerequisites: EXE 504 or equivalent, minimum cumulative GPA of 3.0, and program coordinator permission.

Application of theories and principles to practice in special education and related settings. Students are assigned to fieldwork settings in which program competencies will be assessed. With the approval of their advisers, students may choose to pursue experiences based on their professional goals, past experiences, and specific courses of study.

**EXE 684
GRADUATE SEMINAR IN
EXCEPTIONAL EDUCATION**
3, 3/0

Prerequisites: Completion of all core courses except the research requirement and a minimum of 9 hours of coursework from the specialized program.

Special education issues and problems: review, analysis, and critique of articles and other materials, findings and opinions, research efforts, and approaches. Each student organizes and leads at least one discussion. Students write a formal review of the literature on a problem or issue of their choice and outline a feasible study of a related research problem.

**EXE 690
MASTER'S PROJECT**
3, 3/0

Study undertaken by one or more individuals on a problem of special interest submitted in acceptable form according to directions given by the Exceptional Education Department.

**EXE 695
MASTER'S THESIS**
3, 0/0

Individual investigation of an original problem submitted in acceptable form according to directions given by the Graduate School.

FAR

**FINE ARTS
Fine Arts Department**

**FAR 590
INDEPENDENT STUDY**
3, 3/0

Independent pursuit of the development of a particular project in the discipline of fine arts. Student, adviser, and instructor develop contractual arrangements for project completion.

**FAR 600
GRADUATE STUDIO IN DRAWING**
3, 0/6

Individual concentration in drawing for advanced students; emphasizes growing facility of expression, application to painting and graphic arts; tutorial relationship with instructor; related study and gallery visits; extra class assignments, including minimum studio hours equal to class hours. May be taken up to three times.

FAR 610
GRADUATE STUDIO IN PAINTING
3, 0/6

Individual activities in painting for advanced students; emphasizes personal growth and mastery of chosen media; tutorial relationship with instructor; studio and outdoor problems; use of models; related study and gallery visits; extra class assignments, including minimum studio hours equal to class hours. May be taken up to three times.

FAR 620
GRADUATE STUDIO IN PHOTOGRAPHY
3, 0/6

Advanced black-and-white and color photography (including digital format) as a form of expression, as illustration, as event recording, as a teaching aid, and as used in publications; tutorial relationship with instructor; extra class assignments, including minimum studio hours equal to class hours. May be taken up to three times.

FAR 630
GRADUATE STUDIO IN PRINTMAKING
3, 0/6

Advanced work in printmaking: relief, intaglio, planographic, serigraphic processes; related drawing and design considerations; parallel studies of graphic artists; care of equipment; tutorial relationship with instructor; extra class assignments, including minimum studio hours equal to class hours. May be taken up to three times.

FAR 640
GRADUATE STUDIO IN SCULPTURE
3, 0/6

General studio in advanced sculpture, using additive, subtractive, and constructive methods; continued personal development in such media as clay, plaster, wood, stone, metal; tutorial relationship with instructor; extra class assignments, including minimum studio hours equal to class hours. May be taken up to three times.

FAR 690
MASTER'S PROJECT
3, 3/0

A study undertaken by one or more individuals on a problem of special interest, aimed at making a special contribution to fine arts; may be presented, in part, as an exhibition of materials collected or prepared—including a major exhibition of artwork related to study—with theories and findings reported in an acceptable form according to directions given by the Fine Arts Department.

FAR 695
MASTER'S THESIS
6, 0/0

FIN

FINANCE
Economics and Finance

Department

FIN 619
RISK MANAGEMENT
3, 3/0

Prerequisites: B.A./B.S. with background in financial economics and ECO 507 or instructor permission.

Prepares students to take the Financial Risk Manager (FRM) exam. Risk management: measurement of risk for financial securities, portfolios, managers, and firms; various measurements of risk as mandated by the International Basel Accord on Bank Capital Requirement and the U.S. Securities and Exchange Commission.

FIN 622
CAPITAL MARKETS
3, 3/0

Prerequisite: B.A./B.S. with background in economics or instructor permission.
Fundamental characteristics of capital market securities: bonds, swaps, futures, options, and their combinations. Emphasizes the understanding, creation, and combination of basic securities to create new securities (circus swaps, primes, scores), new products (portfolio insurance), and new strategies (money spreads, hedges).

FIN 630
INTERNATIONAL FINANCE
3, 3/0

Applied analysis of international financial institutions, capital markets, exchange rate determination, and techniques for managing foreign exchange rate risk. Evaluate exchange rate risk management from both the institutional investor and the multinational corporate management perspectives.

FIN 645
ESTATE PLANNING AND TAXATION
3, 3/0

Prerequisite: B.A./B.S. with background in economics or finance.

Principles, concepts, techniques, and tax attributes of lifetime financial planning for the use, conservation, and efficient transfer of individual wealth; traditional planning techniques and major advanced methods, including various living trusts, irrevocable trusts, charitable remainder trusts, and family limited partnership.

FLE

FOREIGN LANGUAGE EDUCATION
Modern and Classical Languages Department

FLE 500
TEACHING A SECOND LANGUAGE IN MIDDLE AND HIGH SCHOOLS
3, 3/0

Prerequisite: Must be admitted into master of science K–12 foreign language teaching program, or instructor permission.

Study of advanced pedagogical approaches, methodologies, and techniques that apply the findings of current research to teaching practices in order to incorporate present standards for second-language learning into the classroom; emphasis on practical application and focus on the learner.

FLE 520
TEACHING A SECOND LANGUAGE AT THE ELEMENTARY LEVEL
3, 3/0

Prerequisite: Bachelor's or master's degree in foreign language education, or state certification in a language other than English grades 7–12, or instructor permission.

Middle school, high school, or prospective teachers of a second language extend their skills and adapt necessary teaching aids to the K–6 level.

FLE 540
SECOND-LANGUAGE ACQUISITION
3, 3/0

Prerequisite: Must be admitted into master of science K–12 foreign language Teaching program, or instructor permission.
Important trends in second-language acquisition research and their implications for foreign language teaching.

FLE 600
INTEGRATING TECHNOLOGY INTO THE SECOND-LANGUAGE CLASSROOM
3, 3/0

Prerequisite: Must be admitted into master of science K–12 foreign language Teaching program, or instructor permission.
Survey of innovations in computer-assisted foreign language learning. Students gain the knowledge and skills of accomplished foreign language teachers to integrate technology into the classroom and to manage educational innovation in general.

FLE 680
SEMINAR: SPECIAL TOPICS IN RESEARCH ON FOREIGN LANGUAGE LEARNING
3, 3/0

Prerequisite: Must be admitted into master of science K–12 foreign language teaching program, or instructor permission.
Survey of current research on foreign language learning. Students gain the knowledge and skills of accomplished foreign language teachers to accommodate language learners.

FRE

FRENCH
Modern and Classical Languages Department

FRE 590
INDEPENDENT STUDY
3, 0/0

FRE 610
THE AGE OF ENLIGHTENMENT

3, 3/0

Prerequisites: Must be admitted into master of science K–12 foreign language teaching program (French) and have completed an appropriate undergraduate course in French literature, or instructor permission.

Detailed text-based study of works by Montesquieu, Voltaire, Diderot, and Rousseau that characterized and shaped the Enlightenment.

FRE 620
GEORGE SAND SEMINAR
3, 3/0

Prerequisites: Must be admitted into master of science K–12 foreign language teaching program (French) and have completed an appropriate undergraduate course in French literature, or instructor permission.

Detailed study of a selection of George Sand's romantic, feminist, pastoral, and socialist novels; excerpts from Sand's autobiography and correspondence; major critics of her works.

FRE 630
FRENCH AND FRANCOPHONE POPULAR NOVELS SINCE THE NINETEENTH CENTURY
3, 3/0

Prerequisites: Must be admitted into master of science K–12 foreign language teaching program (French) and have completed an appropriate undergraduate course in French literature, or instructor permission.

Extensive reading of selected French and/or Francophone popular novels; in-depth study of how each reflects its society, epoch, and author.

FRE 640
Experimental Literature of the Twentieth Century
3, 3/0

Prerequisites: Must be admitted into master of science K–12 foreign language teaching program (French) and have completed an appropriate undergraduate course in French literature, or instructor permission.

Detailed study of experimental literature of the twentieth century, especially surrealism, the theater of the absurd, and the nouveau roman.

FTT

FASHION TECHNOLOGY
Technology Department

FTT 590
INDEPENDENT STUDY
3, 0/0

GEG

GEOGRAPHY
Geography and Planning Department

GEG 503
STUDIES IN RESOURCE CONSERVATION
3, 3/0; Offered by contract only.
Principles of natural resource conservation; selected problems in resource conservation: soil erosion; water pollution; destruction of forests, grasslands, and wildlife; flood control; depletion of minerals. Emphasizes conservation in the United States and New York State.

GEG 505
THE ERIE CANAL: A GEOGRAPHICAL FIELD STUDY
3, 3/0; Offered by contract only.
Historical geography of the building and growth of the Erie Canal and Buffalo; growth and change of the canal system; related urban, commercial, industrial, and recent recreational development. Field trips; fees for trips. Summer only.

GEG 507
MAP READING AND ANALYSIS
3, 3/0; Offered by contract only.
Map essentials; types of maps and symbols; techniques of map interpretation; classification and use of map projections; map collections.

GEG 508
STUDIES IN THE GEOGRAPHY OF NEW YORK STATE
3, 3/0; Offered by contract only.
Physical landscape; cultural geography and settlement; primary economic activities; urban systems and environments; planning and future development of the state.

GEG 516
WATERSHED POLLUTION
3, 3/0
Prerequisite: CHE 101 or CHE 201 or equivalent.
Important pollutants and toxic chemicals generated by anthropogenic activities. Transport, transformation, and fate of these pollutants in watersheds. Impacts of these pollutants on soil, forest, and aquatic ecosystems using specific case studies.

GEG 521
WATERSHED ANALYSIS
3, 3/0; F 08
Prerequisite: Instructor permission.
Introduction to the systematic analysis of stream dynamics of watersheds and the impact of humans on these dynamics. Physical, chemical, and biological processes in watershed management. Class discussion and class project focus on a practical watershed assessment problem.

GEG 525
FUNDAMENTALS OF GIS
3, 3/0; F 08, Sp 09, F 09, Sp 10
Prerequisite: Instructor permission.
Geographic information systems (GIS) and computer cartography. Principles and methods of spatial data automation, models and structures of spatial databases, spatial analysis, and map display in a computerized environment. Computer mapping principles, including scales, map projections, symbolization, coloring strategy, and thematic mapping.

GEG 528
ENVIRONMENTAL ASSESSMENT AND PLANNING APPLICATIONS IN GIS
3, 3/0; Sp 10
Prerequisite: Instructor permission.
Advanced concepts of GIS with a focus on spatial analytical applications for environmental assessment and planning. GIS theories and software implementation through hands-on practice to solve real-world environmental and planning problems.

GEG 565
SOIL SCIENCE AND MANAGEMENT
3, 3/0; F 08
Prerequisite: Instructor permission.
Introduction to soil properties and their influence on physical, chemical, and biological processes. The role of soils in the transportation and fate of water and chemicals. The importance of soils for watershed management and protection of aquatic ecosystems.

GEG 575
PRINCIPLES OF HYDROLOGY
3, 3/0; Sp 09
Prerequisite: Instructor permission.
Principles of hydrology and the relationship to water resources management and watershed processes. Quantifying the processes governing surface, subsurface, and atmospheric movement of water. Methods to collect and analyze hydrologic data.

GEG 590
INDEPENDENT STUDY
3, 0/0

GEG 610
SEMINAR
3, 3/0
Prerequisite: 12 hours of geography coursework.
Investigation, examination, and discussion of topics of current interest to geographers. Topics to be announced. May be taken more than once.

GEG 616
ATMOSPHERIC DEPOSITION MONITORING AND MODELING
3, 3/0; Offered by contract only.
Atmospheric transport and deposition of pollutants. Data interpretation, sampling protocols, monitoring and modeling techniques. Case studies.

GEG 617
HYDROLOGIC MODELING
3, 3/0
Prerequisite: GEG 375 or equivalent.
Mathematical models that can be used to quantify hydrologic processes. Understanding the mechanistic concepts, assumptions behind the models, and the advantages and limitations associated with using the models. Value of observed data in calibrating the models and the uncertainty associated with model predictions.

GEG 619
WETLAND HYDROLOGY AND ECOLOGY
3, 3/0
Prerequisites: Instructor permission, BIO 315 or equivalent, GEG 375/575 or

equivalent.
Introduction to physical, chemical, and ecological processes in wetlands. Impact of wetlands on watershed hydrology and nutrient cycling. Management approaches for wetlands and key regulations that protect wetlands.

GEG 690
MASTER'S PROJECT
3, 0/0
Research or investigation of a particular problem, planned and carried out by the student with consultation and guidance from the instructor, submitted in acceptable form according to the directions given by the Department of Geography and Planning.

GEG 695
MASTER'S THESIS
6, 0/0

GES

GEOSCIENCES Earth Sciences and Science Education Department

GES 502
THE RESTLESS EARTH
3, 3/0; Not open to students with historical geology course credit.
Prerequisite: GES 101 or equivalent.
Evidence for and history of continental drift, polar wandering, and sea-floor spreading; effect of such movements on ancient climates and on the evolution of certain organisms.

GES 503
MINERALOGY AND PETROLOGY FOR EARTH SCIENCE TEACHERS
3, 3/0; Not open to students with geology or earth sciences degrees.
Origin and identification of crystals, minerals, and rocks.

GES 504
FIELD INVESTIGATIONS FOR EARTH SCIENCE TEACHERS
3, 3/0
Measuring surface changes: techniques necessary to construct base maps and topographic maps, collect stream gauging data, and measure slopes; applications to secondary earth science classrooms. Field trips.

GES 506
GEOLOGY OF NEW YORK STATE
3, 3/0
Prerequisites: GES 101 and GES 102 or GES 502 or equivalent.
Physiography, stratigraphy, paleontology, and glacial and economic geology of New York State; geological history of New York region; geology of selected recreational sites. Field trips.

GES 513
ADVANCED FORENSIC GEOSCIENCE

3, 2/2
Prerequisites: DES 101, GES 103, GES 303 or equivalents.
Application of the principles of earth science to the law. Hands-on approach includes details from actual criminal cases. Forensic application of a variety of geological subjects, such as rock and mineral types, geological and topographical maps, fossils, sand, and soil.

GES 521
ADVANCED ENVIRONMENTAL GEOCHEMISTRY
3, 3/0
Prerequisites: GES 101, GES 103, CHE 112, or equivalents.
The chemical nature of the earth. Emphasis on how natural systems work and the fundamental geochemical processes that affect the fate and transport of inorganic and organic pollutants in the environment.

GES 525
ADVANCED HYDROGEOLOGY
3, 2/2
Prerequisites: GES 101 or GEG 101, at least one 300-level GES course, and college algebra.
The interaction of groundwater and geologic material. Occurrence and movement of groundwater, assessment of aquifer properties, and chemical interactions between groundwater and rock. Includes groundwater protection and remediation strategies, as well as mathematical principles of groundwater flow.

GES 529
ADVANCED ENVIRONMENTAL FIELD METHODS AND ANALYSIS
3, 2/2
Prerequisites: GES 101 or GEG 101, at least one 300-level GES course, and college algebra.
Environmental detection of contaminants. Applied study of contaminant distribution and movement. Emphasis on environmental law and regulations, hazardous chemicals, and remediation approaches used by environmental professionals.

GES 535
ASTRONOMY FOR EARTH SCIENCE TEACHERS
3, 3/0; Not open to students with introductory astronomy course credit.
Prerequisite: Prior experience or assignment to teach secondary science.
The dynamic universe: solar system, stars, galaxies, and quasars. Night sky and planetarium observation.

GES 541
METEOROLOGY FOR EARTH SCIENCE TEACHERS
3, 3/0; Not open to students with introductory meteorology course credit.
Prerequisite: Prior experience or assignment to teach secondary science.
Weather as a response to the unequal distribution of energy from the sun; data-collecting techniques; interpretation and predictions appropriate for secondary science education classes.

GES 590
INDEPENDENT STUDY
3, 0/0

GES 605
PALEONTOLOGY
3, 3/0; Not open to students with paleontology course credit.

Prerequisite: GES 101 or equivalent;
prerequisite or corequisite: GES 102 or GES 502.

Basic principles of the nature and interpretation of the fossil record, with an overview of the types of organisms commonly preserved as fossils. Emphasizes practical applications of paleontology and the dynamic nature of science.

GES 606
ADVANCED INVERTEBRATE PALEONTOLOGY
3, 3/0

Prerequisite: GES 302 or equivalent.
Methods and techniques used in the identification and classification of selected fossil invertebrate groups.

GES 607
REGIONAL GEOMORPHOLOGY OF THE UNITED STATES
3, 3/0

Prerequisite: GES 307 or equivalent.
Factors and forces that led to the development of the surface features of selected areas of the United States.

GES 639
TOPICS IN MODERN ASTRONOMY
3, 3/0

Prerequisite: GES 131, GES 535, or equivalent.
The expanding universe, primeval fireball, quasars, missing mass in the universe, black holes, pulsars, neutron stars, origin of the elements, current research.

GES 690
MASTER'S PROJECT
3, 0/0

Research or investigation of a particular problem, planned and carried out by the student with consultation and guidance from the instructor, submitted in acceptable form according to directions given by the Earth Sciences and Science Education Department.

GES 695
MASTER'S THESIS
6, 0/0

GES 795
RESEARCH THESIS IN GEOSCIENCES
6, 0/0

Individual investigation of an original problem submitted in acceptable form according to directions given by the Graduate School.

HEW

HEALTH AND WELLNESS Health and Wellness Department

HEW 520
DRUGS, SOCIETY, AND HEALTH
3, 3/0

Drug addiction: problems related to alcohol, tobacco, and other drugs of abuse affecting the individual, as well as society; drug education curricula within the public schools.

HEW/ADE 580
PARENTING/SEXUALITY EDUCATION PRACTICES IN HEALTH
3, 3/0

Parenting/sexuality curricula and the utilization of technology in teaching health education; theories and practices in sexuality education in American school systems; appropriate course content specific to different grade levels and cultural settings.

HEW 590
INDEPENDENT STUDY
3, 0/0

HEW 605
EPIDEMIOLOGY
3, 3/0

Principles and practices in the cause, prevention, and control of diseases in various community settings: epidemiological terminology; measurement of morbidity, mortality, and fertility; descriptive and analytic epidemiology; screening; infectious disease; occupational epidemiology.

HEW 615
SEMINAR IN HEALTH EDUCATION
3, 3/0

Theories of health behavior and behavior change as they relate to current health education issues: the Health Belief Model and the Health Behavior Change Model; foundations of health education; strategies to promote lifestyle change in health education settings.

HEW 620
HEALTH EDUCATION/PROMOTION STRATEGIES
3, 3/0

Overview and application of specific health promotion/education techniques; risk assessment; individual educational plans; small-group techniques; mass media, lectures, and community organization campaigns.

HEW 690
MASTER'S PROJECT
3, 0/0

A well-planned project undertaken by one or more students, with consultation and guidance from the health and wellness faculty, concerning a health problem or issues of special interest.

HEW 695
MASTER'S THESIS
6, 0/0

HIS

HISTORY History and Social Studies Education Department

HIS 500
STUDIES IN AMERICAN HISTORY
3, 3/0

Aspects of American life: significant trends, policies, and ideas in politics, diplomacy, and national culture. Topics for study dictated by student needs and interests.

HIS 501
STUDIES IN EUROPEAN HISTORY
3, 3/0

Prerequisite: Graduate status.
Cultural, political, and economic perspectives on European history.

HIS/BUS 536
THE AMERICAN ENTERPRISE SYSTEM
3, 3/0; Offered by contract only.

Problems and issues relating to the free enterprise system functioning within a modern industrial society; analysis of the interrelationships of basic business concepts with the decision-making processes of corporate management; emphasis on historical trends and their futuristic implications.

HIS 590
INDEPENDENT STUDY
3, 3/0; Offered by contract only.

Prerequisite: Instructor permission.
Independent inquiry into a specific topical area of U.S., European, or third-world history.

HIS 602/PSC 612
CONTEMPORARY MIDDLE EAST
3, 3/0

Characteristic cultural features of the Middle Eastern countries, with emphasis on Islam; interaction with the Western world; cultural and social changes under way; fundamentalism; problems typical of the underdeveloped nations of the world today.

HIS 603
SOCIAL AND INTELLECTUAL HISTORY OF THE UNITED STATES
3, 3/0

Social roots of thought; effect of ideas on American society; continuing patterns of thought, such as Puritanism, liberalism, democracy; contributions of intellectual leaders.

HIS 605
STUDIES IN AMERICAN COLONIAL HISTORY
3, 3/0

Comparison of colonial policies pursued by European powers in the new world; modification in a new environment of such transplanted elements as the family, church, schools, economy, and government.

HIS 606
PROBLEMS IN BRITISH HISTORY
3, 3/0

Major constitutional, political, social, and intellectual factors that shaped Britain during one of the following periods: medieval England; Tudor Stuart; the eighteenth century; Victorian; the twentieth century.

HIS 607
THE UNITED STATES IN CONTEMPORARY WORLD AFFAIRS
3, 3/0

U.S. foreign policy; United States and the United Nations; Atlantic and Pacific commitments; internal problems (defense, production, inflation, taxation).

HIS 608
REFORM AND REFORMERS IN AMERICAN CIVILIZATION
3, 3/0

Economic and social milieu creating need for reform; personality characteristics of reform leaders; structure and operations of reform movements; selected reform movements and periods of widely sponsored reform sentiment; changes wrought in American society.

HIS 609
HISTORY OF RUSSIAN DIPLOMACY
3, 3/0

Problems of Russian and Soviet foreign policy, with special emphasis on the postrevolutionary period.

HIS 610
BLACK AMERICAN HISTORY
3, 3/0

Slavery, Northern free blacks, and American racial thought from colonial era to Civil War; Northern blacks and the Civil War; black thought during Reconstruction and post-Reconstruction eras; "Black Reconstruction"; problems of American blacks from 1895 to World War II; leadership; urban migration; twentieth-century black thought; American segregationist thought.

HIS 612
AMERICAN FOREIGN POLICY IN THE FAR EAST
3, 3/0

The concept of the United States as a Pacific power; American reaction to European penetration of China; the "open door" policy and dollar diplomacy; American initiative in opening of Japan; World War I and disarmament; events leading to Pearl Harbor; World War II and American "containment" policy; the Korean War and American security pact system in the Pacific; war and peace in Southeast Asia; examination (evaluation) of the Nixon doctrine in the Pacific.

HIS 613
LATIN AMERICA IN THE TWENTIETH CENTURY
3, 3/0

Social and political conditions in Latin America in the early twentieth century; the Latin American economies and the industrial world; nationalism, reform, and revolution (1900–1945); economic, political, and international problems (from World War II to Castro); major issues in Latin America today; the United States and Latin America.

**HIS 614
PROBLEMS IN CLASSICAL AND
MEDIÆVAL HISTORY**

3, 3/0
Particular cultural, intellectual, social, economic, and historiographical problems. Consult with instructor prior to registration for information on specific topics.

**HIS 615
MODERN EUROPEAN POLITICAL
MOVEMENTS**

3, 3/0
Function, structure, behavior, and ideological basis of major European political movements since the turn of the twentieth century.

**HIS 616
PROBLEMS IN MODERN
EUROPEAN HISTORY**

3, 3/0
Prerequisite: Graduate status.
Major trends, movements, and ideas that determined the course of European history from 1500 to the present.

**HIS 617
MODERN EUROPEAN IMPERIAL-
ISM AND COLONIALISM**

3, 3/0
Historical theories and social science; theories of imperialism; origins of World War I as a test case of theories; colonialism in Africa, Asia, and Oceania; colonialism in the new world; breakup of the colonial empires.

**HIS 618
STRANGERS IN THE LAND:
TWENTIETH-CENTURY
IMMIGRANTS IN THE UNITED
STATES**

3, 3/0
The role of the United States in world population movements during the twentieth century; shifts in governmental policy; major groups of twentieth-century immigrants; how and why they came; patterns of settlement; American nativism; assimilation and alienation of immigrants.

**HIS/ANT 620
EXCEPTIONAL HISPANIC INDIVID-
UALS: HISTORICAL AND
CULTURAL CONCERNS**

3, 3/0; Offered by contract only.
A panorama of Hispanic history and culture as it pertains to the major Hispanic populations of the United States, with a concentration on the Puerto Rican and Mexican American populations. Emphasizes the relationship of language and culture, the ultimate implications for bilingual special education, and the Hispanic exceptional child.

**HIS 623
PROBLEMS IN U.S. HISTORY**

3, 3/0
Prerequisite: Graduate status.
Critical and in-depth examination of specific topics or periods in U.S. history within the context of larger interpretations of American historical development. The student may use the course to explore subjects for an eventual master's project. May be taken more than once but not with the same professor; it must be taken with another professor in a different historical specialization. Check with individual professors for topics covered in any given semester.

**HIS 640
TOPICS IN THIRD WORLD
HISTORY**

3, 3/0
Prerequisite: Graduate status.
Social, economic, and political conditions of Africa, Asia, and Latin America under Western colonialism; reform and revolution in the non-Western world; challenge of nation-building in the third world; relations between the developed nations and the third world; cold war and the third world; the United States and the third world.

**HIS 646
TOPICS IN CANADIAN HISTORY**

3, 3/0
Selected themes in Canadian history from the precontact period to the present: settlement; emergence as an independent state; nature of Canadian federalism; role in the modern world.

**HIS 660
MUSEUMS AND SOCIETY**

3, 3/0
Prerequisite: Graduate status.
Museum theory and practice for history and education students and those in such disciplines as anthropology, art, art history, biology, and home economics. Extensive reading; illustrated lectures; exercises in museum and historical agency-related problems.

**HIS 665
CRITICAL ISSUES IN MUSEUM
STUDIES**

3, 3/0
Prerequisite: Graduate status.
Historical, legal, and logistical issues facing museums and museum collections. An opportunity to conduct in-depth research on a topic relevant to the student's graduate and professional interests.

**HIS 688
INTERNSHIP**

3, 3/0; Offered by contract only.
Prerequisites: Graduate status; minimum cumulative GPA of 3.0; background of courses or experience within the area of interest; permission of adviser and department chair.

Guided and supervised field experiences to complement the student's academic program.

**HIS 690
MASTER'S PROJECT**

3, 3/0; Offered by contract only.
Research or investigation of a particular historical topic or issue, planned and carried out by the student in consultation with the instructor.

**HIS 695
MASTER'S THESIS**

6, 0/0
Individual investigation of an original problem submitted in acceptable form according to directions given by the Graduate School.

**HIS 700
SEMINAR IN THE BIBLIOGRAPHY
OF AMERICAN HISTORY**

3, 3/0

Sources, monographs, and general histories in the bibliography of American history; collections of historical materials; historical organizations and services; analysis of selected topics and authors.

**HIS 701
SEMINAR IN THE BIBLIOGRAPHY
OF EUROPEAN HISTORY**

3, 3/0; Offered by contract only.
Sources, monographs, and general histories in the historical bibliography of selected European countries; collections of historical materials; historical organizations; problems of research; analysis of selected topics and authors.

**HIS 702
SEMINAR IN MODERN RUSSIAN
AND EASTERN EUROPEAN
HISTORY**

3, 3/0; Offered by contract only.
Research in the problems of the former Soviet Union, from the establishment of Marxism on Russian soil to the present, emphasizing ideological problems and Russian foreign policy, particularly toward Europe.

**HIS 703
READING SEMINAR IN HISTORY**

3, 3/0
Prerequisite: Graduate status.
Readings on topics and historical periods in American, European, and third world history. Topics vary each session.

**HIS 704
RESEARCH SEMINAR IN HISTORY**

3, 3/0
Prerequisite: Graduate status.
Preparation of individual research papers on some undeveloped aspect of American, European, or third world history; guidance in the location and use of source materials, bibliographical tools, and writing technique. Topics vary each session. May be taken up to three times.

**HIS 709
LOCAL HISTORY: RESEARCH
METHODS AND TECHNIQUES**

3, 3/0
Preparation of individual research papers on some undeveloped aspect of local history; guidance in historical research and writing techniques. Topics vary each session. May be taken up to three times.

**HIS 711
SEMINAR IN AMERICAN HISTORY**

3, 3/0
Problems in American social, intellectual, or diplomatic history as determined by student needs and staff; historical methodology; the philosophy of history and historical writing; individual projects and seminar discussion. Topics vary each session. May be taken up to three times.

**HIS 795
MASTER'S THESIS**

3-6, 0/0; Offered by contract only.
Individual investigation of an original problem submitted in acceptable form according to directions given by the Graduate School.

HPR

COACHING AND PHYSICAL EDUCATION

**HPR 500
PHILOSOPHIES, PRINCIPLES, AND
ORGANIZATION OF ATHLETICS IN
EDUCATION**

3, 3/0
Basic philosophy and principles of coaching interscholastic athletics; state, local, and national policies and regulations related to athletics. Partially fulfills New York State requirements for interscholastic coaching certification.

**HPR 519
SOCIAL IMPACT OF SPORT**

3, 3/0
Diverse sociological perspectives of sport: social organization of sport-related activities; formal and informal organizational networks of social status, norms, goals, and values; the impact of sport on American society.

**HPR 535
ATHLETIC TRAINING: PREVENTION
AND CARE OF ATHLETIC INJURIES**

3, 3/0
Prerequisites: Background in anatomy and physiology from BIO 308, HPR 301, or equivalent.

Relationship between conditioning performance and injury prevention: techniques and programs designed to stress the importance of body conditioning needed for specific sports, as well as the possible treatment of athletic injuries. Partially fulfills New York State requirements for interscholastic coaching certification.

**HPR 590
INDEPENDENT STUDY**

3, 0/0

**HPR 690
MASTER'S PROJECT**

6, 0/0

INT

INDUSTRIAL TECHNOLOGY Technology Department

**INT 590
INDEPENDENT STUDY**

3, 0/0

**INT 601
ENGINEERING ECONOMY**

3, 3/0
Prerequisite: Graduate status.
Alternatives in processing, equipment selection, operation, and output in comparison to the various methods of production available currently or in the future.

**INT 602
OPERATIONS MANAGEMENT
(ADVANCED SYSTEMS ANALYSIS)
3, 3/0**

Prerequisite: Graduate status.

Concepts and analytical techniques of comprehensive systems for operations management; quantitative methods in practical situations; modeling, computer interactive analysis, and nonsteady state situations; data streams; smoothing; forecasting; cyclic components; feedback.

**INT 610
MANAGERIAL MARKETING
3, 3/0**

Prerequisite: Graduate status.

Corporate and marketing strategy in a firm; the effect of product, distribution, pricing, and promotion strategy on corporate success; performance evaluation of a plan, including information gathering, analysis, and action.

**INT 611
NETWORK THEORY
3, 3/0**

Prerequisite: Graduate status.

Network-based management systems; management training in network planning; timely and cost-effective supervision of tasks and activities; exposure to a variety of project configurations. Term project required.

**INT 612
QUALITY CONTROL
MANAGEMENT
3, 3/0**

Prerequisite: TEC 313 or equivalent.

Process control; parametric and nonparametric techniques; sampling program development; establishing quality policy; selling quality in the organization; design of experiments; developing vendor relations; quality planning.

**INT 630
WORK MEASUREMENT
3, 3/0**

Prerequisites: Graduate status and TEC 405 or equivalent.

Methods of work-measurement systems; development and application of time standards and incentive programs.

**INT 659
INTEGRATED INDUSTRIAL SYSTEMS
3, 3/0**

Prerequisite: Appropriate business systems and technical-level coursework necessary for acceptance to an industrial technology master's program.

Application, justification, and implementation of integrated industrial systems: establishment of database systems; specific computerized industrial systems; integrated industrial systems; flexible manufacturing.

**INT 661
MANUFACTURING PROPERTIES OF
MATERIALS
3, 3/0**

Prerequisites: TEC 201, TEC 311, or equivalent.

Selection and classification of materials and methods of manufacturing; choosing an economical fabrication procedure based on the physical properties of the material.

**INT 662
MANUFACTURING CASE STUDY
3, 3/0**

Prerequisite: Graduate status.

Case studies of contemporary industrial manufacturing operations: comprehensive analysis of facilities; production planning; process; production; quality control; human/machine scheduling; managed activities.

**INT 670
PRODUCTION AND INVENTORY
MANAGEMENT
3, 3/0**

Prerequisite: Graduate status.

Principles and techniques of production and inventory management; typical problems; applications.

**INT 675
JUST-IN-TIME MANUFACTURING
3, 3/0**

Prerequisite: Graduate status.

Principles and techniques of small lot production; techniques that make small lot production economical.

**INT 689
RESEARCH DESIGN AND
METHODOLOGY
3, 3/0**

Prerequisite: Completion of 9 credit hours of graduate study in industrial technology.

Research methodology; technical proposal and project/thesis development; data collection and analysis in an industrial facility; technical presentation; skill enhancement.

**INT 690
MASTER'S PROJECT
3, 0/0**

A study undertaken by one or more individuals on a problem of special interest submitted in acceptable form according to directions given by the Technology Department.

**INT 695
MASTER'S THESIS
6, 0/0**

Individual investigation of an original problem submitted in acceptable form according to directions given by the Graduate School. Problem and procedure must be approved by the student's graduate adviser, the MSIT advisory committee, and the department chair before the investigation is begun.

MAT

**MATHEMATICS
Department**

**MAT 501
MATH FOR TEACHERS: ALGEBRA
3, 3/0**

Prerequisite: 24 credit hours of undergraduate mathematics.

Operational systems, number systems, groups, rings, fields, ordered fields, functions over fields, algebraic properties of the trigonometric functions.

**MAT 521
MATH FOR TEACHERS:
GEOMETRY
3, 3/0**

Formal and informal geometry, congruence, measurement, constructions, similarity, transformations, coordinate geometry, trigonometric functions.

**MAT 552
MATHEMATICS FOR TEACHERS:
NUMBER THEORY
3, 3/0**

Prerequisites: MAT 121 and MAT 122.

Structure of the integers; divisibility; primes; congruence classes; linear congruences; Diophantine equations; Fibonacci numbers; selected topics.

**MAT 581
MATHEMATICS FOR TEACHERS:
PROBABILITY AND STATISTICS
3, 3/0**

Prerequisites: Two semesters of calculus, MAT 325, MAT 311 or equivalent.

Probability, probability distributions, sampling, design of experiments, hypothesis testing, regression, analysis of variance, nonparametric statistics.

**MAT 590
INDEPENDENT STUDY
3, 0/0**

**MAT 593
MATHEMATICS FOR TEACHERS:
DISCRETE MATHEMATICS
3, 3/0**

Prerequisites: MAT 121 and MAT 122.

Partitions; permutations; probability measure; conditional probability; vectors; matrices; operations and properties; linear programming applications.

**MAT 601
TOPICS IN MODERN ALGEBRA
3, 3/0**

Prerequisite: Acceptance to the mathematics master's degree program.

Groups, semigroups, and monoids; homomorphisms; subgroups and cosets; Abelian groups; the symmetric group; actions and the Sylow theorems; rings, subrings, and ideals; ring homomorphisms; integral domains, division rings, and fields; ring and field extensions; Galois theory.

**MAT 603
THEORY OF MATRICES
3, 3/0**

Prerequisite: 12 credit hours of mathematics coursework beyond calculus.

Algebra of matrices and determinants; equivalence, similarity, and congruence relations on matrices; vector spaces, linear transformations; characteristics, roots, and vectors; applications.

**MAT 611
TOPICS IN REAL ANALYSIS
3, 3/0**

Prerequisites: Three semesters of an undergraduate calculus sequence.

Real numbers; basic topology; continuous functions; differentiation; the Riemann-Stieltjes integral; sequence and series of functions; some special functions; the Lebesgue theory.

**MAT 620
MODERN GEOMETRY:
SELECTED TOPICS
3, 3/0**

Prerequisite: MAT 322.

Foundations; axiomatic projective geometry; real projective geometry; linear projective geometry; finite geometries; non-Euclidean geometries.

**MAT 631
FOUNDATIONS OF
MATHEMATICS
3, 3/0**

Prerequisite: 12 credit hours of mathematics coursework beyond calculus.

Axiomatic method; theory of sets and infinite sets; real number system and linear continuum; the complex number system; groups and their significance for the foundations; development of various viewpoints on foundations.

**MAT 651
THEORY OF NUMBERS
3, 3/0**

Prerequisite: 12 credit hours of mathematics coursework beyond calculus.

Counting and recording of numbers; properties of numbers; Euclid's algorithm; prime numbers; the aliquot parts; indeterminate problems and their theory; Diophantine problems; congruences; analysis of congruences; Wilson's theorem; Euler's theorem; theory of decimal expansions; the converse of Fermat's theorem; the classical construction problems.

**MAT 670
DISCRETE MATHEMATICS AND
FOUNDATIONS OF COMPUTER
SCIENCE
3, 3/0**

Prerequisite: Acceptance to the mathematics master's degree program.

Problems, theorems, and discrete structures commonly used in mathematics and computer science; mathematical analysis of algorithmic/computer solutions to problems in mathematics; mathematical problems that are not solvable by computer.

**MAT 681
INTERMEDIATE PROBABILITY
3, 3/0**

Prerequisite: MAT 381.

Advanced probability theory; combinatorial analysis; the laws of large numbers; theory of stochastic processes.

**MAT 683
STATISTICAL THEORY
3, 3/0**

Prerequisite: MAT 381.

Probability; estimation; confidence sets; tests of hypotheses; decision theory; Bayesian methods; linear models; nonparametric methods.

**MAT 690
MASTER'S PROJECT
3, 3/0**

Prerequisite: Written approval of the faculty member and the department chair.

Research study or investigation of a mathematical problem or topic, conducted under the guidance of a graduate faculty member of the Mathematics Department.

MAT 695
MASTER'S THESIS
3, 0/0

MAT 696
HISTORY OF MATHEMATICS
3, 3/0

Prerequisite: 12 credit hours of mathematics coursework beyond calculus.

Chronological study of the development of mathematics; contributions of nations, ages, or periods; selected biographies, appraisals, and critiques; problem studies.

MAT 699
SELECTED ADVANCED TOPICS
3, 3/0

Prerequisite: Instructor permission.
Seminar considering an advanced branch of contemporary mathematics such as combinatorics, game theory, automata theory, or intensive study of an advanced topic in mathematical research.

MAT 701
MODERN ALGEBRA I
3, 3/0

Prerequisite: MAT 301.
Cyclic groups; transformation groups; factor groups; groups with operators; isomorphism theorems; composition series; direct products of groups; Sylow theorems; residue class rings; operations on ideals; extensions of rings.

MAT 711
ANALYSIS I
3, 3/0

Prerequisite: MAT 417.
Graduate functions of several variables; topology of Euclidean space; continuity and uniform continuity; convergence and uniform convergence of sequences of functions; partial differentiation; chain rule; implicit functions theorems; Riemann-Stieltjes integration; multiple integrals; Fubini's theorem; line integrals.

MAT 771
TOPOLOGY
3, 3/0

Topological spaces; bases and subbases; subspaces; continuous functions; product spaces; separation and countability; Urysohn's Lemma; Tietz extension theorem; compactness; metrizable; connectedness; locally compact spaces and compactification.

MAT 795
MASTER'S THESIS
6, 6/0

Individual investigation into an area of mathematics, under the guidance of a faculty member.

MCL

LANGUAGES
Modern and Classical
Languages Department

MCL 590
INDEPENDENT STUDY
3, 0/0

MCL 690
MASTER'S PROJECT
3, 0/0

MCL 695
MASTER'S THESIS

MED

MATHEMATICS
EDUCATION
Mathematics Department

MED 500
PRACTICUM I: GRADUATE FIELD
EXPERIENCE IN SECONDARY
MATHEMATICS EDUCATION
3, 1/4

Current school mathematics practices; related mathematics teaching periodicals and policy documents; affective and societal issues surrounding teaching; reflective observation of teaching and learning and the classroom, school, and community contexts in which they occur.

MED 501
PRACTICUM II: PRACTICE
TEACHING MATHEMATICS IN THE
MIDDLE SCHOOL
3, 0/6

Prerequisites: Admission to the postbaccalaureate certification program; successful completion of all coursework in the postbaccalaureate certification program; recommendation from a member of the mathematics education graduate faculty committee.

Introduction to the practice of classroom teaching for the prospective middle/junior high school mathematics teacher. Field experience with classroom discipline, instructional planning, curricular issues, assessment and testing, field observation and participation, peer presentations, construction and critique of lesson plans, use of media, and research and use of teaching strategies.

MED 502
PRACTICUM III: PRACTICE
TEACHING MATHEMATICS IN THE
HIGH SCHOOL
3, 0/6

Introduction to the practice of classroom teaching for prospective high school mathematics teachers. Field experience with classroom discipline, instructional planning, curricular issues, assessment and testing, field observation and participation, peer presentations, construction and critique of lesson plans, use of media, and research and use of teaching strategies.

MED 524
MATHEMATICS INSTRUCTION AT
THE SECONDARY LEVEL
1, 1/0

Prerequisite: Education major or mathematics education postbaccalaureate certification program major.

Content, teaching methods, activities, and evaluation procedures typically used in mathematics instruction at the secondary level.

MED 590
INDEPENDENT STUDY
3, 3/0

MED 595
RESEARCH METHODS AND
TECHNIQUES IN MATHEMATICS
EDUCATION
3, 3/0

Prerequisite: 9 credit hours of graduate-level coursework in mathematics.

Nature of educational research; problem analysis; descriptive and inferential statistics; experimental design; strategy of historical, descriptive, and experimental studies.

MED 600
CONTEMPORARY MATHEMATICS
CURRICULUM DEVELOPMENT
3, 3/0

Contemporary mathematics curricular developments in the United States and other countries, and the forces that shape these developments; historical background influencing current curricular developments; mathematics curricula and their relation to school and society.

MED 601
SEMINAR IN THE TEACHING OF
MATHEMATICS
3, 3/0

Techniques and topics for teaching mathematics in grades 7 through 12.

MED 602
MATHEMATICS FOR THE
SECONDARY SCHOOL TEACHER:
SELECTED TOPICS
3, 3/0

Prerequisite: Instructor permission.
Selected topics in mathematics related to the secondary mathematics curriculum.

MED 604
TEACHING OF GEOMETRIC
CONCEPTS
3, 3/0

Prerequisite: Acceptance to the mathematics master's degree program.

Traditional Euclidean approach; transformational, computer-based, and integrated approaches to the teaching and learning of geometric concepts in high school; learning theory, pedagogy, mathematical models, and new developments specific to the teaching of geometric concepts in the high school curriculum.

MED 605
TEACHING OF ALGEBRAIC
CONCEPTS
3, 3/0

Prerequisite: Acceptance to the mathematics master's degree program.

Structuralist, intuitive, historical, and applied approaches to the teaching of concepts of algebra; learning theory, pedagogy, mathematical models, and new developments specific to the teaching of algebraic concepts in the high school curriculum.

MED 606
LOGO: COMPUTER PROGRAM-
MING II FOR EDUCATORS
3, 3/0

History of LOGO language development; use of LOGO in the secondary and elementary schools; turtle graphs and the use of LOGO in problem solving. Appropriate for teachers of math and science, as well as teachers of other subjects.

MED 607
TECHNOLOGY IN MATHEMATICS
EDUCATION
3, 3/0

Use and evaluation of equipment and software available for the mathematics classroom: developing classroom lessons using the equipment and software; preparation for adoption of future developments. Students produce projects for use in their classrooms.

MED 683
PROBLEM SOLVING AND PROBLEM
POSING
3, 3/0

Prerequisite: Acceptance to the mathematics master's degree program.

Techniques of problem solving and problem posing in mathematics: role of teaching problem solving in the high school setting.

MED 690
MASTER'S PROJECT
3, 3/0

Study undertaken by one or more individuals, under the supervision of a member of the graduate mathematics faculty, on a problem of special interest submitted in acceptable form according to directions given by the Mathematics Department.

MED 795
MASTER'S THESIS IN
MATHEMATICS EDUCATION
6, 6/0

Individual investigation of original problem, conducted under the supervision of a member of the graduate mathematics faculty, submitted in acceptable form according to directions given by the Graduate School.

NFS

**NUTRITION AND FOOD
SCIENCE**
Dietetics and Nutrition
Department

NFS 500
MACRONUTRIENTS
3, 2/0

Prerequisites: Undergraduate coursework in nutrition, biochemistry, and physiology or instructor permission.

Proteins, carbohydrates, and lipids, with an emphasis on metabolism and interrelationships with other nutrients.

NFS 501
MICRONUTRIENTS
3, 0/0

Prerequisites: Undergraduate coursework in nutrition, biochemistry, and physiology or instructor permission.

Vitamins and minerals with emphasis on functional roles in metabolism, interrelations, and nutritional significance.

NFS 503
NUTRITIONAL INTERVENTION IN DISEASE STATES
3, 0/0

Multisystemic view of the physiologic and biochemical alterations in disease states requiring dietary modifications; current theories of dietary treatment in light of epidemiologic data, current scientific research, and factors affecting an individual's ability to carry out the necessary modifications; altered regulatory mechanisms, including interrelations of medications and other treatments with nutritional status and dietary intake.

NFS 510
NUTRITION EDUCATION
2, 2/0

Prerequisite: Instructor permission.
History, important issues, and basic principles of nutrition education: instructional and evaluation methods; current research literature.

NFS 590
INDEPENDENT STUDY

NFS 604
ADVANCES IN FOOD RESEARCH
2, 2/0

Prerequisite: Undergraduate coursework in food, food preparation, or food science or instructor permission.
Current methods of foods preservation, processing, packaging, and storage; new food products; processing trends in the food industry.

NFS 605
RECENT ADVANCES IN NUTRITION
3, 3/0

Principles of nutrition: current trends and research in nutrition; application of nutrition information to specific problems of individuals and society.

NFS 615
NUTRITION EDUCATION PRACTICUM
1, 0/3

Prerequisites: NFS 510 and instructor permission.

Application of the principles of nutrition education learned in NFS 510 by designing, presenting, and evaluating a nutrition education project.

NFS 620
SEMINAR IN NUTRITION
1, 1/0

Prerequisites: 6 credit hours of graduate-level coursework.
In-depth exploration of topics of interest to students. Each student presents one seminar on a topic agreed upon by the instructor and the student.

NFS 634
NUTRITION AND GERONTOLOGY
2, 2/0

Nutritional aspects of aging and individuals in later maturity.

NFS 689
METHODS OF NUTRITIONAL INQUIRY
0, 1/0

Integration and application of research methods to complete projects. Students develop and present to the advisory committee proposals for their individual research projects.

NFS 690
MASTER'S PROJECT
3, 0/0

Prerequisite: Instructor permission.
A project undertaken by one or more individuals on a problem of special interest, planned and carried out with consultation and guidance from the instructor.

NFS 695
MASTER'S THESIS
6, 0/0

Individual investigation of an original problem submitted in acceptable form according to directions given by the Graduate School.

PHY

PHYSICS Physics Department

PHY 500
PHYSICS EDUCATION RESEARCH SEMINAR
3, 3/0; Sp 09, Sp 10

Designed for practicing or future high school physics teachers. Includes reading and discussion of current research in physics education, evaluation and discussion of the application of this research to the New York State physics core curriculum, and the exploration and practice of assessment techniques in high school physics.

PHY 502
INITIAL PHYSICS TEACHING EXPERIENCE FOR ALTERNATIVE CERTIFICATION
3, 3/0; Sp 09, F 09, Sp 10, F 10

Prerequisite: Acceptance to the alternative certification in physics program.
Full-time physics teaching with college supervision and school supervision: lesson and unit design, classroom management, designing and implementing student assessment, participation in school community.

PHY 507
ENERGY AND FORCE INTERACTIONS FOR K-8 TEACHERS
3, 1/4

Designed for elementary teachers to better understand physics and the nature of science. Focus on interactions and energy: energy, force, friction, gravity, magnetic fields, light, and electricity. Not appropriate for students with extensive physics background.

PHY 510
PROCESS SKILLS IN PHYSICS TEACHING
6, 3/3; Su 09, Su 10

Use of inquiry-based teaching techniques to develop concepts central to the New York State physics core curriculum. Use of mathematical

analysis, scientific inquiry, and engineering design to pose questions, seek answers, and develop strategies to achieve these goals in the physics classroom with adolescent learners.

PHY 518
WAVE PHENOMENA AND OPTICS
3, 3/0; Sp 09, F 10

Wave phenomena, including types, motion, interaction, and propagation; diffraction and interference; geometrical optics. Emphasizes research-based profiles of student conceptual difficulties and instructional strategies to remedy them.

PHY 520
MODERN PHYSICS
3, 3/0; F 09

Major developments in twentieth-century physics and how they changed our understanding of the nature of space and time and the structure of matter. Application of physics education research to teaching relativity and quantum physics in a high school physics course.

PHY 525
NUCLEAR AND PARTICLE PHYSICS
3, 3/0; F 08, Sp 10

Major developments in nuclear and particle physics in the twentieth century, culminating in the standard model. Discussion of how these developments changed our understanding of the structure of matter.

PHY 590
INDEPENDENT STUDY
3, 0/0

PHY 620
POWERFUL IDEAS AND QUANTITATIVE MODELING: FORCE, MOTION, AND ENERGY
6, 3/3; Su 09, Su 10

Designed for practicing or future high school physics teachers. Activities and laboratory experiences develop ideas in force, motion, and energy. Exemplary pedagogical techniques are modeled and examined.

PHY 622
POWERFUL IDEAS AND QUANTITATIVE MODELING: ELECTRICITY AND MAGNETISM
6, 3/3; Su 09, Su 10

Designed for high school physics teachers. Activities and laboratory experiences develop ideas in electricity and magnetism. Exemplary pedagogical techniques are modeled and examined.

PHY 690
MASTER'S PROJECT
6, 3/0; Sp 09, F 09, Sp 10, F 10
Study of a problem of special interest, preapproved by the physics graduate committee and submitted in acceptable form according to directions given by the Physics Department.

PLN

PLANNING Geography and Planning Department

PLN 560
ENVIRONMENTAL IMPACT ASSESSMENT
3, 3/0; Sp 10

Prerequisite: Instructor permission.
Legislation and technical procedures involved with the development of environmental impact statements (EIS) and environmental assessments (EA). Practical experience in conducting an EA and writing an EIS. Includes one field trip.

PLN 590
INDEPENDENT STUDY
3, 0/0

PLN 610
SEMINAR
3, 3/0

Prerequisite: 12 credit hours of geography or planning coursework or instructor permission.

Investigation, examination, and discussion of topics of current interest to geographers and planners. Topics to be announced.

PLN 690
MASTER'S PROJECT
3, 0/0

Research or investigation of a particular problem, planned and carried out by the student in consultation and guidance from the instructor, submitted in acceptable form according to the directions given by the Department of Geography and Planning.

PLN 695
MASTER'S THESIS
6, 0/0

PSC

POLITICAL SCIENCE Political Science Department

PSC 500
PUBLIC ADMINISTRATION AND POLICY
3, 3/0

Public administration and related areas of public policy: comparative and historical aspects; public budgeting; agency management; decision making, evaluation, and policy analysis; ethical issues and administrative law.

PSC 590
INDEPENDENT STUDY
3, 0/0

PSC 605
POLITICS OF THE THIRD WORLD
3, 3/0

Dimensions and directions of the politics of the third world: political, economic, and social changes; armament of political authority and human rights and their dependency and interdependency in international systems.

PSC 606
INTERNATIONAL RELATIONS
3, 3/0

International organization, international law, regionalism, economic development, role of ideologies, relationship of domestic and international politics.

PSC 607
AMERICAN GOVERNMENT AND POLITICS
3, 3/0

Foundations of the American constitutional system; federalism, separation of powers, and role of the states; political parties, pressure groups, and electoral processes; the president, bureaucracy, Congress, and courts.

PSC 612/HIS 602
CONTEMPORARY MIDDLE EAST
3, 3/0

Characteristic cultural features of the Middle Eastern countries, with emphasis on Islam; interaction with the Western world; cultural and social changes under way; fundamentalism; problems typical of the underdeveloped nations of the world today.

PSC 690
MASTER'S PROJECT
3, 0/0

Research or investigation of a particular problem, planned and carried out by student with consultation and guidance from instructor.

PSC 695
MASTER'S THESIS
6, 0/0

PSY

PSYCHOLOGY
Psychology Department

PSY 590
INDEPENDENT STUDY
3, 0/0

PSY 690
MASTER'S PROJECT
3, 0/0

Research or investigation of a specific psychological topic, planned and carried out by the student with the approval, consultation, and guidance of a graduate faculty member of the Psychology Department.

PSY/BUS/EDF 715
MANAGEMENT PRACTICES AND TECHNIQUES
3, 3/0

Prerequisites: PSY 101 and instructor permission.

Major management theories and factors affecting organizational systems; managing conflict and negotiating agreements; effective interpersonal skills for managers; defining problems and generating creative alternatives; types and sources of information needed by managers; relation of leadership style to staff productivity and development; relating effectively to upper-level management.

SAF

SAFETY STUDIES
Continuing Professional Studies

SAF 560
DRIVER AND TRAFFIC SAFETY EDUCATION
6, 6/30

Prerequisites: Acceptable driving record; valid New York State driver's license; minimum of two years' driving experience. Classroom and behind-the-wheel instruction; instructional methods/techniques; setting up approved programs; three-hour pre-licensing course content; theory and maintenance of the automobile; devices and aids for teaching in the classroom and automobile. Successful completion satisfies State Education Department requirements for provisional approval to teach driver and traffic safety education in all secondary schools, colleges, and universities; also qualifies an individual to teach in a commercial driving school.

SAF 565
TRENDS AND PROBLEMS IN DRIVER AND TRAFFIC SAFETY EDUCATION
3, 3/0

Prerequisites: SAF 417 and SAF 425. Teaching, administration, and supervision of driver education and traffic safety; programs, methods, and materials; resource people and agencies; critical analysis of existing procedures; discussion of problems. Lectures and/or field trips for expert information from the field. Required for permanent approval of driver education instructors.

SCI

SCIENCE
Earth Sciences and Science Education

SCI 521
LABORATORY TECHNIQUES FOR ELEMENTARY SCHOOL TEACHERS
3, 3/0

Appropriate laboratory exercises designed to acquaint the elementary teacher with the subject matter, laboratory equipment, and techniques necessary to effectively teach elementary science.

SCI 524
SECONDARY SCIENCE INSTRUCTION
1, 1/0

Content, teaching methods, activities, and evaluation procedures typically included in secondary science classes. Designed to aid exceptional education resource and consulting teachers at the secondary level in their work with science content teachers.

SCI 527
CURRENT TOPICS IN SCIENCE
3, 3/0

Prerequisites: 6 credit hours each in two science areas.

Implications of science research for present and future living; implications of research in science for the secondary school science curriculum.

SCI 537
ENERGY EDUCATION IN THE PRECOLLEGE CLASSROOM
3, 3/0

Current domestic energy issues: energy laws, energy conservation, fossil fuels, nuclear power, and the renewable energy options (solar, wind, biomass, etc.); existing energy curricula (units, films, games); appropriate classroom and field energy activities for children. Designed for in-service, precollege teachers.

SCI 540
LOCAL ENVIRONMENTAL PROBLEMS SEMINAR
3, 3/0

In-depth discussions of environmental problems on the Niagara Frontier by local experts, designed to supply in-service science teachers and others concerned with the local environment with current local environmental information.

SCI 590
INDEPENDENT STUDY
3, 0/0

SCI 628
SEMINAR IN SECONDARY SCIENCE EDUCATION
3, 3/0

Recent research in educational psychology and its application for science teaching; contemporary trends in science education; sociological and philosophical implications of science; recent research in science education; issues identified by students enrolled in class. Required in all graduate science secondary education programs.

SCI 631
CURRICULAR TRENDS IN SCIENCE TEACHING IN THE ELEMENTARY SCHOOL
3, 3/0

Recent curriculum developments in elementary school science. Students work with elementary science curricular material in a workshop atmosphere to understand the philosophies, objectives, and historical events leading to their development. Students develop and share practical classroom adaptations of these materials.

SCI 632
CURRICULAR TRENDS IN SCIENCE TEACHING IN THE SECONDARY SCHOOL
3, 3/0

Prerequisite: One year of teaching science as a subject, assignment to an administrative position with responsibility for science curriculum, or instructor permission. Recent curriculum developments, philosophies, objectives, and materials; current understandings of the psychology of inquiry;

historical events leading to changes in curriculum. Required in all graduate secondary education programs.

SCI 685
EVALUATION IN SCIENCE EDUCATION
3, 3/0

Prerequisite: 6 credit hours of graduate-level coursework.

Philosophy of evaluation as applied to science education; models of evaluation; techniques used in the practical application of the models; examples and procedures directly related to science teaching. Required in all science secondary education programs.

SCI 690
MASTER'S PROJECT
3, 3/0

A study undertaken by one or more individuals on a problem of special interest submitted in acceptable form according to directions given by the Earth Sciences and Science Education Department.

SCI 694
RESEARCH METHODS AND TECHNIQUES IN SCIENCE EDUCATION
3, 3/0

Prerequisite: 9 credit hours of graduate-level coursework in science or science education.

Nature of educational research: problem analysis; descriptive and inferential statistics; experimental design; strategy of historical, descriptive, and experimental studies. Recommended for students planning educational research projects or theses.

SCI 695
MASTER'S THESIS
6, 0/0

SCI 795
MASTER'S THESIS
6, 0/0

Individual investigation of an original problem submitted in acceptable form according to directions given by the Graduate School.

SLP

SPEECH-LANGUAGE PATHOLOGY
Speech-Language Pathology Department

SLP 501
CLINICAL METHODS
2, 2/0

Prerequisite: Graduate status in speech-language pathology program; corequisite: SLP 515.

Techniques used in the clinical management of speech, language, and swallowing disorders across cultures and throughout the life span; professional issues in speech-language pathology.

**SLP 505
GRADUATE PRACTICUM IN AN
EDUCATIONAL SETTING**
6, 0/30

Prerequisites: Graduate status in speech-language pathology program; minimum grade of B in previous clinical practica; minimum of 48 hours of professional coursework; instructor permission; prerequisite or corequisite: SLP 424 or equivalent.
Supervised clinical experience in an educational setting providing diagnosis and therapy for a variety of communication disorders. Meets the student teaching requirement for the New York State Education Certification of Teachers of the Speech and Hearing Handicapped.

**SLP 511
NEURAL PROCESSES OF
COMMUNICATION**
2, 2/0

Prerequisite: Graduate status in speech-language pathology program.
Basic concepts of neuroanatomy and neurophysiology as the foundation for diagnosis and treatment of communicative disorders of neurologic origin.

**SLP 515
CLINICAL PRACTICUM**
1-3, .5/2.5–.5/8.5

Prerequisites: Graduate status in speech-language pathology program, SLP 501, and completion of 25 hours of supervised observation.

Supervised on-campus clinical practicum for graduate students in speech-language pathology as necessary to meet state licensure and national certification requirements; policies and procedures of Buffalo State College Speech-Language-Hearing Clinic. Required for all graduate students prior to enrollment in SLP 505 or SLP 611.

**SLP 516
DIAGNOSTIC PRINCIPLES AND
PROCEDURES**
2, 2/0

Prerequisite: Graduate status in speech-language pathology program.
Exploration and implementation of diagnostic procedures in speech-language pathology. Emphasis is on the problem-solving principles and the importance of evidence-based and culturally appropriate practice in the clinical evaluation of individuals with communication and swallowing disorders.

**SLP 541
LANGUAGE DISORDERS:
BIRTH TO AGE 5**
3, 3/0

Prerequisites: Graduate status in speech-language pathology and a course in language development/disorders.
Communicative and social interactions of children from birth to age 5; team approaches to the assessment of the communication patterns of infants, toddlers, and preschoolers from a range of culturally and linguistically diverse backgrounds; the development of appropriate intervention programs; theoretical, evidence-based, and practical applications.

**SLP 580
RESEARCH METHODS IN
SPEECH-LANGUAGE PATHOLOGY**
2, 2/0

Prerequisite: Graduate status in speech-language pathology program.
Research questions and methodologies used in communication disorders and sciences that include cultural and ethical considerations: quantitative and qualitative research models; literature review techniques; research-question formation; methods of data collection; critical analysis. Students formulate a research question in consultation with program faculty and review pertinent literature.

**SLP 590
INDEPENDENT STUDY**
3, 0/0

Independent study arranged between a graduate faculty member and a student. See the Independent Study section of this catalog for the independent study policy.

**SLP 605
CONTEMPORARY ISSUES IN
CLINICAL INTERACTIONS:
FAMILIES AND CULTURE**
2, 2/0

Prerequisite: Graduate status in speech-language pathology program.
Multicultural considerations within the framework of family systems theory; working effectively with families from a variety of multicultural backgrounds; developing strategies for enhancing communication with families across diverse cultures; assessment and intervention techniques for various communication and swallowing disorders in multicultural populations; understanding relevant policies for multicultural speech-language pathology.

**SLP 606
FLUENCY DISORDERS AND CLEFT
PALATE**
3, 3/0

Prerequisite: Graduate status in speech-language pathology program.
Etiologic, psychologic, sociologic, clinical, and multicultural information relative to the assessment and treatment of individuals with dysfluent speech or disordered speech caused by cleft lip and/or palate; theoretical, evidence-based, and practical applications.

**SLP 607
DYSPHAGIA ACROSS THE
LIFE SPAN**
2, 2/0

Prerequisites: Graduate status in speech-language pathology program, SLP 511 or equivalent.
Congenital and acquired swallowing disorders, their neurological and physical bases, differential diagnoses, prevention, treatments, and associated cultural and ethical issues across the life span; theoretical, evidence-based, and practical applications.

**SLP 608
NEUROMOTOR SPEECH
DISORDERS AND DYSPHAGIA
ACROSS THE LIFE SPAN**
2, 2/0

Prerequisites: Graduate status in speech-

language pathology program, SLP 511 or equivalent.

Child and adult neuromotor speech disorders, including neurological bases, differential diagnoses, prevention, and treatments across the life span and with culturally and linguistically diverse populations; theoretical, evidence-based, and practical applications.

**SLP 609
DISORDERS OF VOICE**
2, 2/0

Prerequisite: Graduate status in speech-language pathology program.
Nature, etiology, diagnosis, and intervention of voice disorders across the life span and in multicultural populations: theoretical, evidence-based, and practical applications.

**SLP 610
EVALUATION AND TREATMENT OF
PHONOLOGICAL DISORDERS**
2, 2/0

Prerequisite: Graduate status in speech-language pathology program.
Methods for evaluating and treating speech-sound production disorders, including consideration of cultural and linguistic differences in speech production: theoretical, evidence-based, and practical applications.

**SLP 611
EXTERNSHIP IN
COMMUNICATION DISORDERS**
6, 15/30

Prerequisites: Graduate status in speech-language pathology program; minimum grade of B in previous clinical practica; minimum of 48 hours professional coursework; instructor permission.
Supervised clinical practicum in community speech-language-hearing clinics and/or hospitals providing diagnosis and therapy for a variety of communication disorders across the life span. Required for ASHA certification and NYS license in speech-language pathology. Required for all speech-language pathology majors.

**SLP 615
AURAL REHABILITATION**
3, 3/0

Prerequisites: Graduate status in speech-language pathology program, SLP 314 or equivalent.
Effects of hearing loss on speech and language development, speech perception, and educational achievement; rehabilitative strategies, amplification devices, and communication options for the hearing impaired; characteristics and management of children with central auditory processing disorders; cultural and ethical considerations; theoretical, evidence-based, and practical applications.

**SLP 621
AUGMENTATIVE AND ALTERNATIVE
COMMUNICATION**
2, 2/0

Prerequisite: Graduate status in speech-language pathology or exceptional education program.
Needs of nonspeaking individuals across the life span and in multicultural populations; alternative and augmentative communication systems, techniques, and strategies; assessment and intervention strategies for alternative and

augmentative communication; theoretical, evidence-based, and practical applications.

**SLP 622
LANGUAGE DISORDERS OF
SCHOOL-AGED INDIVIDUALS**
3, 3/0

Prerequisite: Graduate status in speech-language pathology program.
Culture-based approaches and procedures applied to assessment and intervention of language disorders of school-aged children; theoretical, evidence-based, and practical applications.

**SLP 623
ACQUIRED LANGUAGE DISORDERS**
3, 3/0

Prerequisites: Graduate status in speech-language pathology program, SLP 511 or equivalent.
Acquired neurogenic language disorders in adults; differential diagnosis and treatment of the varieties of cognitive/communicative disorders associated with acquired brain damage, with consideration for cultural and linguistic background; theoretical, evidence-based, and practical applications.

**SLP 690
MASTER'S PROJECT**
3, 3/0

Prerequisite: SLP 580 or equivalent.
Study undertaken by one or more individuals on a problem of special interest submitted in acceptable written form according to guidelines provided by the Speech-Language Pathology Department.

**SLP 695
MASTER'S THESIS**
3–6, 3–6/0

Individual investigation of an original problem submitted in acceptable form according to guidelines provided by the Graduate School.

SOC

SOCIOLOGY Sociology Department

**SOC 501
CONTEMPORARY SOCIAL
PROBLEMS**
3, 3/0; Offered by contract only.
Prerequisite: SOC 100.

Problem areas of American society; sources of information; techniques for discovering and analyzing social problems; analysis of several major problems, selected in accordance with student needs and interests.

**SOC 505
TECHNOLOGY, SOCIETY, AND
SELF**
3, 3/0; Offered by contract only.
Prerequisite: SOC 100.

Interplay between society, technology, and science; social organization of research; social factors fostering research and development; consequences of science and technology for society, various institutions, subgroups within society, and individuals in society.

SOC 506
MINORITY GROUPS IN
AMERICAN CULTURE
3, 3/0; Offered by contract only.

Prerequisite: SOC 100.

Current and historical sociocultural characteristics, experiences, and development of major religious, racial, and ethnic minorities; social conflict, current trends, and recent issues in minority-majority social relationships.

SOC 590
INDEPENDENT STUDY
3, 0/0

SOC 690
MASTER'S PROJECT
3, 0/0

SOC 695
MASTER'S THESIS
6, 0/0

SPA

SPANISH Modern and Classical Languages Department

SPA 502
SEMINAR IN LATIN AMERICAN
LITERATURE: SELECTED TOPICS
3, 3/0

Prerequisites: Graduate status or undergraduate senior with an average of B or better in upper-level Spanish courses and permission of instructor, department chair, and dean of Graduate School.

In-depth treatment of a selected topic; analysis of selected works, with readings in history and literary criticism; research into specific problems.

SPA 606
CONTEMPORARY CIVILIZATION
AND CULTURES OF SPAIN
3, 3/0

Prerequisite: Must be admitted into Master of Science K-12 Foreign Language Teaching program, or instructor permission.

Development of cultures in Spain since the country's emergence as a modern nation state; their implications for Spain's future within the European community.

SPA 609
CIVILIZATIONS AND CULTURES OF
LATIN AMERICA
3, 3/0

Prerequisite: Must be admitted into Master of Science K-12 Foreign Language Teaching program, or instructor permission.

Challenges faced by the emerging nations of Latin America from the nineteenth century to the present; emphasis on the relationships between these diverse cultures and the rest of the world.

SPA 617
DON QUIXOTE
3, 3/0

Prerequisite: Must be admitted into Master of Science K-12 Foreign Language Teaching program, or instructor permission.

Cervantes' Don Quixote in its historical

context; multiple levels of interpretive reading; questions of genre relationships.

SPA 631
CINEMA OF SPAIN
3, 3/0

Aspects of the cinema of Spain as a reflection of Spanish cultures; individual directors, periods of film production; influence of politics and culture on the cinema.

SSE

SOCIAL STUDIES EDUCATION History and Social Studies Education Department

SSE 502
TEACHING SOCIAL STUDIES
3, 0/3

This course must be taken concurrently with a History content course designated by the department.

Social studies content and methodology; trends in curriculum; evaluation; instructional resources.

SSE 513
SEMINAR IN SECONDARY SOCIAL
STUDIES
3, 3/0

Review of the literature and curriculum of the social studies; philosophical, historical, and sociological aspects of the social studies.

Introductory course for secondary social studies graduate students. Required for all social studies students.

SSE 524
SECONDARY SOCIAL STUDIES
INSTRUCTION
1, 1/0

Prerequisite: Exceptional education or secondary education major.

Teaching methods and materials used in secondary social studies education; laboratory sessions with social studies materials; construction of tests and evaluative instruments.

SSE 540
BEGINNING TEACHER MENTOR-
ING SEMINAR IN THE SOCIAL
STUDIES
3, 3/0

Application of the theory learned in teacher preparation experiences to the practice of classroom teaching; application of educational theory in the first-year classrooms; reflective activities to improve classroom practices in light of a pedagogical theory; utilization of teacher teams to improve classroom practices and develop problem-solving strategies. Review of theory learned in certification programs. Designed to support first-year social studies teachers.

SSE 590
INDEPENDENT STUDY
3, 3/0; Offered by contract only.

Prerequisite: Instructor permission.

Independent inquiry into a specific topic area of social studies education.

SSE 595
RESEARCH METHODS IN
SECONDARY SOCIAL STUDIES
3, 3/0

Development of research problems; resources and tools of educational research; research methods and preparation of a research paper; assessment of national social studies curriculum projects.

SSE 605
TOPICS FOR IN-SERVICE
EDUCATION
1-6, 0/0

Prerequisite: Provisional/initial certification.

Topical seminar to meet in-service needs.

Topics may be selected from any area of instructional and curricular concerns appropriate for the secondary school. Lectures, discussions, microteaching, and projects according to the topics selected. 1-6 credit hours, commensurate with the nature of the topic and the extent of the study. Graduate credit for any secondary education program.

SSE 610
THE STUDY OF PEACE AND WAR
IN THE SECONDARY SCHOOL
3, 3/0

Possible approaches for achieving peace, strategies for teaching them, and criteria for judging them. Requires the teaching of a unit on peace at a site chosen by the student and instructor.

SSE 640
SOCIOHISTORICAL CONTEXT AND
ISSUES OF DIVERSITY IN U.S.
SCHOOLING
3, 3/0

Issues of diversity, multiculturalism, equity, justice, and participatory democracy in society, schools, and classrooms; historical development of multicultural education; response of society, schools, and teachers to calls for multicultural education; in-depth study and analysis of a multicultural program.

SSE 655
SOCIAL STUDIES LABORATORY
3, 3/0

Prerequisite: Graduate status; SSE 513 recommended. *This course must be taken concurrently with a history content course designated by the department.*

Interaction with fellow professionals and development of skills to design, implement, and evaluate curriculum materials as required by newer approaches to the social studies.

SSE 670
EXPERIENCES IN SIMULATION AND
ROLE PLAYING FOR THE SOCIAL
STUDIES TEACHER
3, 3/0

Prerequisite or corequisite: SSE 513.

Techniques of simulation and role playing; creating models of social situations and translating them into dynamic simulation and role-playing episodes.

SSE 688
INTERNSHIP
1, 0/0

Prerequisites: Graduate status; 6 credit hours of graduate coursework in major courses of history and social studies education; minimum cumulative GPA of 3.0; minimum 3.0 GPA in major and

background of courses and experience within area of interest.

Guided and supervised field experiences to complement the student's academic program. Approval of the placement from student's adviser and department chair.

SSE 689
RESEARCH METHODS AND
TECHNIQUES IN SECONDARY
SOCIAL STUDIES
3, 3/0

Prerequisites: One social studies elective.

Quantitative and qualitative research in the social studies; development of research problems; data collection in the social studies; format of a research paper.

SSE 690
MASTER'S PROJECT
3, 0/0; Offered by contract only.

Prerequisite: Written approval of faculty adviser and department chair.

Research or investigation of a particular problem, planned and carried out under the guidance of a qualified member of the graduate faculty, submitted in acceptable form according to directions given by the History and Social Studies Education Department.

SSE 695
MASTER'S THESIS
6, 0/0

SSE 730
PRACTICUM: INNOVATIONS IN
THE SOCIAL STUDIES
3, 0/0

Practical experiences in identifying, selecting, and field testing curricular and instructional innovations in secondary social studies. Required for all degree students.

SSE 795
MASTER'S THESIS
6, 0/0

Individual investigation of an original problem submitted in acceptable form according to directions given by the Graduate School.

SWK

SOCIAL WORK Social Work Department

SWK 546
CHILD ABUSE AND NEGLECT:
SCHOOL AND COMMUNITY
COOPERATION
3, 3/0

Prerequisites: Graduate status and experience in school/school-related setting or instructor permission.

Role of the teacher in cases of child abuse and neglect; nature and causation of abuse and neglect; workings of the current child protection system; specific role of the teacher in that system; broader role of the school in remedying and preventing child maltreatment.

SWK 590
INDEPENDENT STUDY
3, 0/0

**SWK 603
HUMAN RESOURCE
MANAGEMENT
3, 3/0**

Personnel-related functions and the utilization of resources to support these functions within organizations: design of in-service training programs; supervisory skills for enhancing motivation and productivity; employee benefit packages; grievance and labor relations plans; proposals to obtain funding for training.

**SWK 643
SUPERVISION IN THE HUMAN
SERVICES
3, 3/0**

Prerequisite: Graduate status.

Roles and functions of supervisors in a variety of work settings; supervisory role in coordinating agency functions and meeting clients' needs; worker role and responsibilities; leadership, organizational, and systems theory; application of theory to practice situations.

**SWK 645
PROGRAM PLANNING IN THE
HUMAN SERVICES
3, 3/0**

Prerequisites: One course in statistics and research methodology.

Use of data for program planning in human service organizations. Students design a study pertinent to human services management.

**SWK 690
MASTER'S PROJECT
3, 3/0**

Study undertaken by one or more individuals on a problem of special interest submitted in acceptable form according to directions given by the Social Work Department.

**SWK 695
MASTER'S THESIS
6, 0/0**

TEC

TECHNOLOGY Technology Department

**TEC 590
INDEPENDENT STUDY
3, 0/0**

**TEC 690
MASTER'S PROJECT
3, 0/0**

**TEC 695
MASTER'S THESIS
6, 0/0**

TED

TECHNOLOGY EDUCATION Technology Department

**TED 501
TECHNOLOGY EDUCATION IN
THE ELEMENTARY SCHOOL
3, 3/0**

Planning, organizing, and constructing activities for the elementary school; use of a variety of materials; technology education in the elementary school; changing technological processes and their effect on society. For technology education and non-technology education majors.

**TED 507
TECHNOLOGY EDUCATION
FACILITY PLANNING AND
MANAGEMENT
3, 3/0**

Problems involved in planning new technology education facilities or remodeling of existing laboratories; concepts in relationship of objectives to facilities; space allocation, area development, and organization; service requirement; criteria for selection and placement of equipment; analyzing available equipment and writing specifications; critique of an existing technology education laboratory.

**TED 521
OCCUPATIONAL AND PRACTICAL
ARTS EDUCATION FOR STUDENTS
WITH SPECIAL NEEDS
3, 3/0**

Prerequisite: Technology education, career and technical education, or exceptional education program major or instructor permission.

Nature and needs of individuals with disabilities and the disadvantaged enrolled in occupational and practical arts education; curriculum development; evaluating work potential; identifying instructional resources and teaching methods and techniques; interpreting research; identifying the function of available vocational rehabilitation and occupational and practical arts education programs.

**TED 526
OCCUPATIONAL AWARENESS
3, 3/0**

Fieldwork designed to increase educators' occupational awareness as based on the 15 U.S. Office of Education career clusters. Students attend sessions wherein cluster representatives of business, industry, and labor organizations discuss work environment, obtaining employment, employer and employee job expectations, economic benefits, and required skills.

**TED 531
ELEMENTS OF MANUFACTURING
TECHNOLOGY
3, 3/0**

Manufacturing technology systems; management; personnel; and production.

**TED 540
CAREER AWARENESS IN TECHNOL-
OGY FOR THE
ELEMENTARY SCHOOL
3, 3/0**

Current developments in career education; role of the elementary school in career education; curriculum development and correlation techniques.

**TED 590
INDEPENDENT STUDY
3, 3/0**

**TED 600
FOUNDATIONS IN TECHNOLOGY
EDUCATION
3, 3/0**

European and American antecedents of technology education; social and technological factors that make the technology education a major condition of culture; psychological and philosophical basis for teaching technology education. Required for technology education majors.

**TED 690
MASTER'S PROJECT
3, 3/0**

Prerequisites: TED 600, BUS 601, BUS 602, and BUS 604.

A study undertaken by one or more individuals on a problem of special interest submitted in acceptable form according to directions given by the Technology Department.

**TED 695
MASTER'S THESIS
6, 0/0**

Prerequisites: TED 600, BUS 601, BUS 602, and BUS 604.

Individual investigation of an original problem submitted in acceptable form according to directions given by the Graduate School. Problem and procedure must be approved by the student's graduate adviser, the graduate advisory committee, and the department chair before the investigation is begun.

**TED 701
SEMINAR IN TECHNOLOGY
EDUCATION: WRITING AND
PUBLISHING
3, 3/0**

Mechanics of writing and publishing, for those with a genuine desire and ability to express ideas in written form.

**TED 702
SEMINAR IN THE PHILOSOPHY OF
TECHNOLOGY EDUCATION
3, 3/0**

Critical examination of technology from a historical perspective: study of prevalent views and issues relative to technology; its meaning, characteristics, and interdisciplinary scope; its relation to science and its place in education.

**TED 703
SEMINAR IN THE DEVELOPMENT
OF INSTRUCTIONAL MATERIALS
3, 3/0**

An opportunity to maximize the effectiveness of the instructional program and its resultant benefits, for those with a genuine desire to develop and organize teaching materials.

**TED 705
CAREER EXPLORATION IN
TECHNOLOGY FOR THE MIDDLE
SCHOOL
3, 3/0**

Student-teacher planning in career education for the middle school: curriculum development articulation methodology; developing instructional units of study for computer-based resource units.

**TED 706
CAREER EXPLORATION IN
TECHNOLOGY FOR THE
SECONDARY SCHOOL
3, 3/0**

The evolution and potentiality of career education for adolescents; opportunities for participants to develop occupational cluster information banks, including instructional objectives, content, media, learning activities, and evaluation devices.

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Sharon F. Cramer, Ph.D., *New York University*, Exceptional Education Department (1985)

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Edward O. Smith Jr., Ph.D., *Lehigh University*, History and Social Studies Education Department (1963)

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Dennis L. Gaffin, Ph.D., *University at Buffalo*, Associate Professor (1989)

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Mary L. Wyrick, Ph.D., *Pennsylvania State University*, Chair and Professor (1992)

Lucy Andrus, M.S.Ed., *Buffalo State College*, Professor (1982)

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Shirley Hayes, Ph.D., *Pennsylvania State University*, Associate Professor (2005)

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John E. Mack, Ph.D., *The Catholic University of America*, Associate Professor, SUNY Chancellor's Award for Excellence in Teaching (1973)
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 Jeanne M. Burns, M.S.Ed., *Buffalo State College*, Lecturer (2005)
 Susan E. Buscher, M.S., *Buffalo State College*, Lecturer (2006)
 Sharon F. Cramer, Ph.D., *New York University*, SUNY Distinguished Service Professor; Chair, College Senate (1985)
 Kathy R. Doody, M.S.Ed., *Buffalo State College*, Lecturer (2004)
 Barbara J. Dray, Ph.D., *University of Texas at Austin*, Assistant Professor (2005)
 Warren L. Gleckel, Ph.D., *Syracuse University*, Associate Professor; Interim Chair, Educational Foundations; Interim Director, Center for Excellence in Urban and Rural Education (1975)
 Shannon E. Gormley, Ph.D., *The Pennsylvania State University*, Assistant Professor (2005)
 Theresa M. Janczak, M.S., *Buffalo State College*, Assistant Professor (2005)
 Paul E. Lepo, M.S.Ed., *Buffalo State College*, Lecturer (2004)
 Michaelene M. Meger, Ph.D., *University at Buffalo*, Associate Professor (1993)
 Kevin J. Miller, Ed.D., *West Virginia University*, Assistant Professor (2006)
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 Lisa A. Rafferty, M.S.Ed., *Buffalo State College*, Lecturer (2007)
 Sharon L. Raimondi, Ph.D., *American University*, Associate Professor (1990)
 Katherine C. Sacca, Ed.D., *University at Buffalo*, Professor, SUNY Chancellor's Award for Excellence in Teaching (1992)
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 Dennis L. DeHart, M.F.A., *The University of New Mexico*, Assistant Professor (2005)
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 Leslie R. Krims, M.F.A., *Pratt Institute*, Professor (1969)
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 Joseph A. Miller, M.F.A., *Southern Illinois University*, Associate Professor (1997)
 Constance L. Payne, M.F.A., *University of Wisconsin-Madison*, Associate Professor (1985)
 Kenneth P. Payne, M.F.A., *University of Wisconsin*, Professor (1990)
 Brian J. Porter, M.F.A., *New York Academy of Art*, Lecturer (1997)

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 James R. Bensley, M.A., *Virginia Polytechnic Institute and State University*, Lecturer (1997)
 Ian G. Droppo, Ph.D., *University of Exeter*, Adjunct Associate Professor (1996)
 Gordon S. Fraser, Ph.D., *University of Illinois*, Professor (1998)
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 Wende A. Mix, Ph.D., *University at Buffalo*, Associate Professor (2004)
 Thomas P. D. Murphy, Ph.D., *University of British Columbia*, Adjunct Assistant Professor (2000)
 Michael L. Sampson, Ph.D., *University of Louisville*, Adjunct Associate Professor (2004)
 Tao Tang, Ph.D., *University of Wisconsin-Milwaukee*, Associate Professor (1998)
 Stephen J. Vermette, Ph.D., *McMaster University*, Professor (1993)
 William E. Wiczorek, Ph.D., *University at Buffalo*, Professor; Director, Center for Health and Social Research (1997)

HEALTH AND WELLNESS DEPARTMENT

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 Susan M. Baldwin, Ph.D., *Kent State University*, Assistant Professor (2002)
 Scott W. Roberts, Ed.D., *Brigham Young University*, Professor (1986)

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 Felix L. Armfield, Ph.D., *Michigan State University*, Associate Professor (2000)
 Bridget M. Chesterton, Ph.D., *University at Stony Brook*, Assistant Professor (2007)
 Cynthia A. Conides, Ph.D., *Columbia University*, Associate Professor; Program Coordinator, Museum Studies Option, Multidisciplinary Studies Program (1997)
 Martin F. Ederer, Ph.D., *University at Buffalo*, Assistant Professor (1998)
 Jill M. Gradwell, Ph.D., *University at Buffalo*, Assistant Professor (2004)
 Michael C. Lazich, Ph.D., *University at Buffalo*, Associate Professor (1997)
 Kathryn H. Leacock, M.L.S., *University at Buffalo*, Lecturer (2006)
 Ann K. Lupo, M.S.Ed., *Buffalo State College*, Lecturer (1997)
 Gary Marotta, Ph.D., *New York University*, Professor (2000)
 Kenneth S. Mernitz, Ph.D., *University of Missouri*, Associate Professor (1985)
 William I. Mitchell, Ph.D., *University of Missouri*, Associate Professor (1991)
 Andrew D. Nicholls, Ph.D., *University of Guelph*, Associate Professor (1996)
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 Robin S. Sanders, Ph.D., *University of Illinois at Urbana-Champaign*, Associate Professor (1997)
 Margaret Sherman, Ph.D., *North Dakota State University*, Assistant Professor (2002)
 John J. Slivka, Ph.D., *University at Buffalo*, Professor (1969)
 David C. Wilson, Ph.D., *University at Buffalo*, Associate Professor (2002)
 Jodelle S. Wuerzter-Magner, Ph.D., *University of Maryland*, Assistant Professor (2000)
 Tingyao Zheng, Ph.D., *University of Georgia*, Associate Professor (2000)

MODERN AND CLASSICAL LANGUAGES DEPARTMENT

Lee Ann Grace, Ph.D., *University at Buffalo*, Associate Professor; Assistant Dean, International and Exchange Programs (1973)
Andrea Guiati, Ph.D., *Rutgers University*, Professor; Director, All College Honors Program; SUNY Chancellor's Award for Excellence in Teaching (1985)
Eliane McKee, Ph.D., *Ohio State University*, Professor; SUNY Chancellor's Award for Excellence in Teaching (1985)
Barbara D. Miller, Ph.D., *University at Buffalo*, Associate Professor (2001)
Rafika Merini, Ph.D., *Binghamton University*, Associate Professor (1990)
Raul F. Neira, Ph.D., *University of Texas at Austin*, Associate Professor (1991)
Lucy M. Schwartz, Ph.D., *Harvard University*, Professor (1995)
Mark K. Warford, Ph.D., *University of Tennessee*, Associate Professor (2000)

MUSIC

Bradley J. Fuster, D.M.A., *University of Southern California*, Chair and Associate Professor (2004)
Lisa R. Hunter, *University of Arizona*, Assistant Professor (2003)
Charles Mancuso, M.A., *Buffalo State College*, Professor (1976)
Sarah E. Meredith, Ph.D., *Florida State University*, Assistant Professor (2003)

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PHYSICS DEPARTMENT

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POLITICAL SCIENCE DEPARTMENT

Laurie A. Buonanno, Ph.D., *John Hopkins University*, Chair and Professor (2006)
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Keith M. Henderson, D.P.A., *University of Southern California*, Professor (1969)
Patrick J. McGovern, Ph.D., *University of Arizona*, Assistant Professor (2006)
Anthony T. Neal, Ph.D., *Clark Atlanta University*, Associate Professor (1988)

PSYCHOLOGY DEPARTMENT

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Robert P. Delprino, Ph.D., *Old Dominion University*, Associate Professor (1992)
Jean M. DiPirro, Ph.D., *University at Buffalo*, Associate Professor (1999)
Gary W. Heiman, Ph.D., *Bowling Green State University*, Professor (1976)
Jennifer S. Hunt, Ph.D., *University of Minnesota-Crookston*, Associate Professor (2007)
Michael G. MacLean, Ph.D., *Arizona State University*, Associate Professor (1997)
Jill M. Norvilitis, Ph.D., *Wayne State University*, Associate Professor (1997)
R. Karen O'Quin, Ph.D., *Michigan State University*, Professor; Associate Dean, School of Natural and Social Sciences (1982)
Howard M. Reid, Ph.D., *University of Maine at Orono*, Professor; SUNY Chancellor's Award for Excellence in Teaching (1977)
Pamela Schuetze-Pizzarro, Ph.D., *Virginia Polytechnic Institute and State University*, Professor (1996)
Michael J. Zborowski, Ph.D., *Ohio University*, Associate Professor (1991)

SOCIAL WORK DEPARTMENT

J. Patrick Dexter, M.S.W., *University at Buffalo*, Chair and Associate Professor (1977)
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David Wegenast, D.S.W., *City University of New York*, Professor (1973)

SOCIOLOGY DEPARTMENT

Virginia E. Grabiner, Ph.D., *University of California-Berkeley*, Chair and Associate Professor; SUNY Chancellor's Award for Excellence in Teaching (1975)
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Gerhard J. Falk, Ed.D., *University at Buffalo*, Professor; SUNY Chancellor's Award for Excellence in Teaching (1957)
Amitra A. Hodge, Ph.D., *Texas Women's University*, Associate Professor (2000)
Eric J. Krieg, Ph.D., *Simmons College*, Associate Professor (1997)
Rosalyn A. Lindner, Ph.D., *University of Minnesota*, Professor; Associate Vice President, Academic and Student Affairs (1974)
Timothy A. McCorry, M.A., *St. John's University*, Assistant Professor (2007)
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Ron Stewart, Ph.D., *Howard University*, Professor (1990)
Thomas S. Weinberg, Ph.D., *University of Connecticut*, Professor; SUNY Chancellor's Award for Excellence in Teaching (1969)
Gary S. Welborn, Ph.D., *University at Buffalo*, Associate Professor (1993)
Zhang Jie, Ph.D., *Brigham Young University*, Professor; Director, Center for China Studies (1997)

SPEECH-LANGUAGE PATHOLOGY DEPARTMENT

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Dolores E. Battle, Ph.D., *University at Buffalo*, Professor; Senior Adviser to the President for Equity and Campus Diversity (1970)
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Deborah M. Insalaco, Ph.D., *University of Arizona*, Assistant Professor (1999)
Gary W. Jones, Ph.D., *University at Buffalo*, Associate Professor; Dean, School of the Professions (1992)
Barbara Weitzner-Lin, Ph.D., *University at Buffalo*, Associate Professor (1985)

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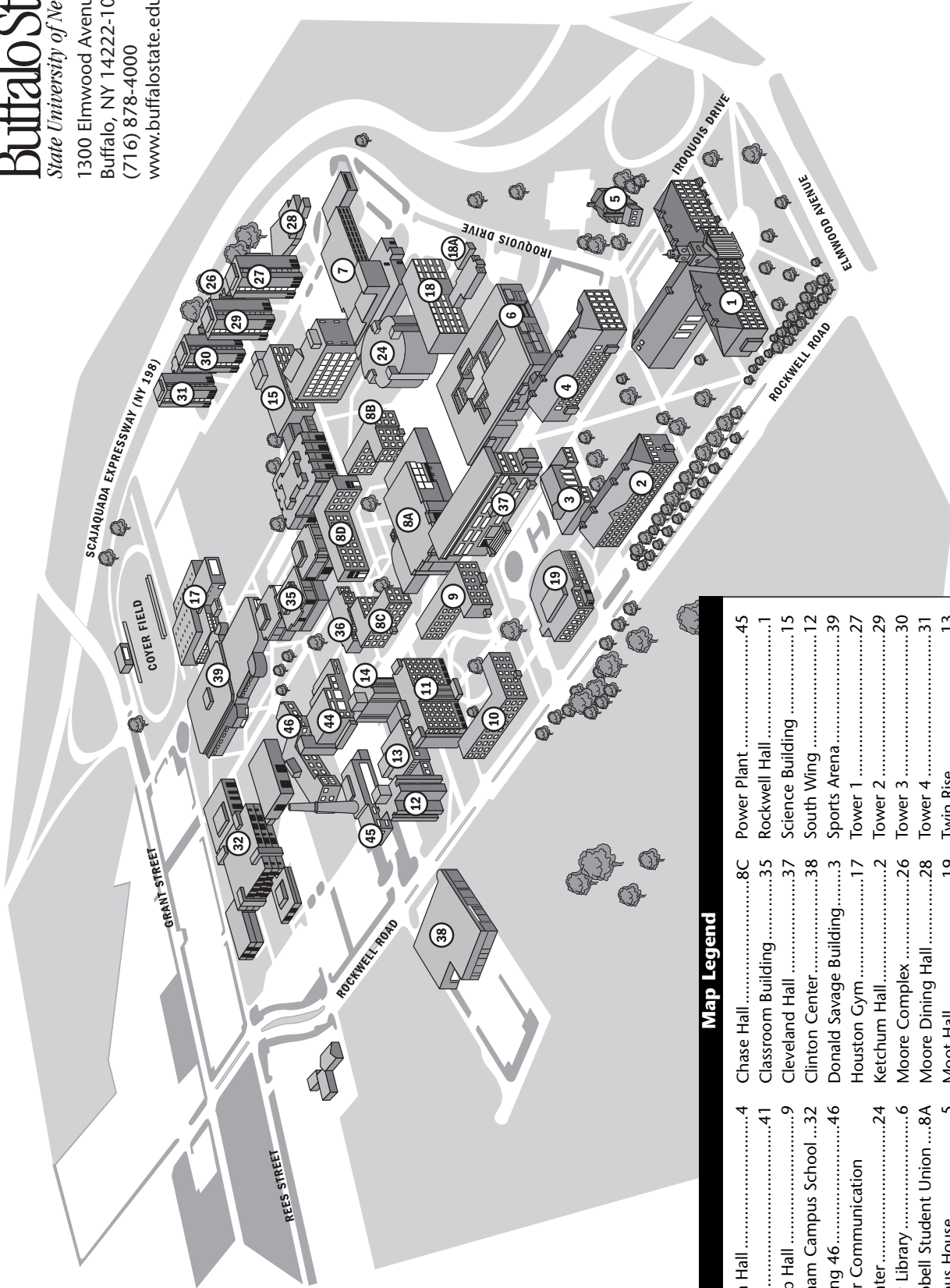
Richard J. Herdlein III, Ph.D., *University of Pittsburgh*, Chair and Associate Professor (1997)
Wanda M. Davis, D.Ed., *Pennsylvania State University*, Associate Professor (1995)
Bonita R. Durand, Ph.D., *University at Buffalo*, Lecturer; Executive Assistant to the President, President's Office (1996)
Timothy L. Gallineau, D.Ed., *University of Akron*, Associate Professor (1992)
Kimberly A. Kline, Ph.D., *Indiana University*, Assistant Professor (2007)

TECHNOLOGY DEPARTMENT

Mohan S. Devgun, Ph.D., *Birmingham University*, Professor (1990)
John J. Earshen, Ph.D., *University at Buffalo*, Associate Professor (1980)
Stephanie Goldberg, Ph.D., *University at Buffalo*, Professor (1990)
Clark W. Greene, M.S.Ed., *Buffalo State College*, Lecturer (2000)
Anthony J. Hotchkiss, Ph.D., *Southampton University*, Professor (1994)
David J. Kukulka, Ph.D., *University at Buffalo*, Professor (1982)
James B. Linehan, M.B.A., *University at Buffalo*, Lecturer (2005)
Steve M. Macho, Ed.D., *West Virginia University*, Assistant Professor (2006)
James Mayrose, Ph.D., *University at Buffalo*, Assistant Professor (1999)
Elaine M. Polvinen, M.E.A., *Rochester Institute of Technology*, Professor (1991)
Paul L. Siciliano, Ed.D., *West Virginia University*, Lecturer, (2007)
Richard A. Stempniak, Ph.D., *University at Buffalo*, Associate Professor (1974)

THEATER DEPARTMENT

Carol Y. Beckley, M.F.A., *Southern Methodist University-Dallas*, Associate Professor (1994)



Map Legend

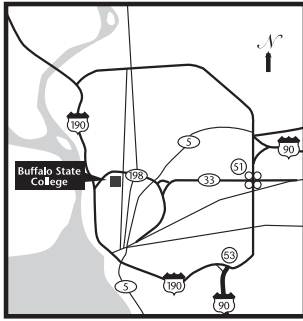
Bacon Hall.....4	Chase Hall.....8C	Power Plant.....45
Barn.....41	Classroom Building.....35	Rockwell Hall.....1
Bishop Hall.....9	Cleveland Hall.....37	Science Building.....15
Buckham Campus School.....32	Clinton Center.....38	South Wing.....12
Building 46.....46	Donald Savage Building.....3	Sports Arena.....39
Bulger Communication Center.....24	Houston Gym.....17	Tower 1.....27
Butler Library.....6	Ketchum Hall.....2	Tower 2.....29
Campbell Student Union.....8A	Moore Complex.....26	Tower 3.....30
Campus House.....5	Moore Dining Hall.....28	Tower 4.....31
Cassety Hall.....8B	Moot Hall.....19	Twin Rise.....13
Caudell Hall.....18	Neumann Hall.....10	Upton Hall.....7
Caudell Hall Annex.....18A	North Wing.....14	Weigel Health Center.....36
Central Receiving.....44	Perry Hall.....8D	
	Porter Hall.....11	

Buffalo State

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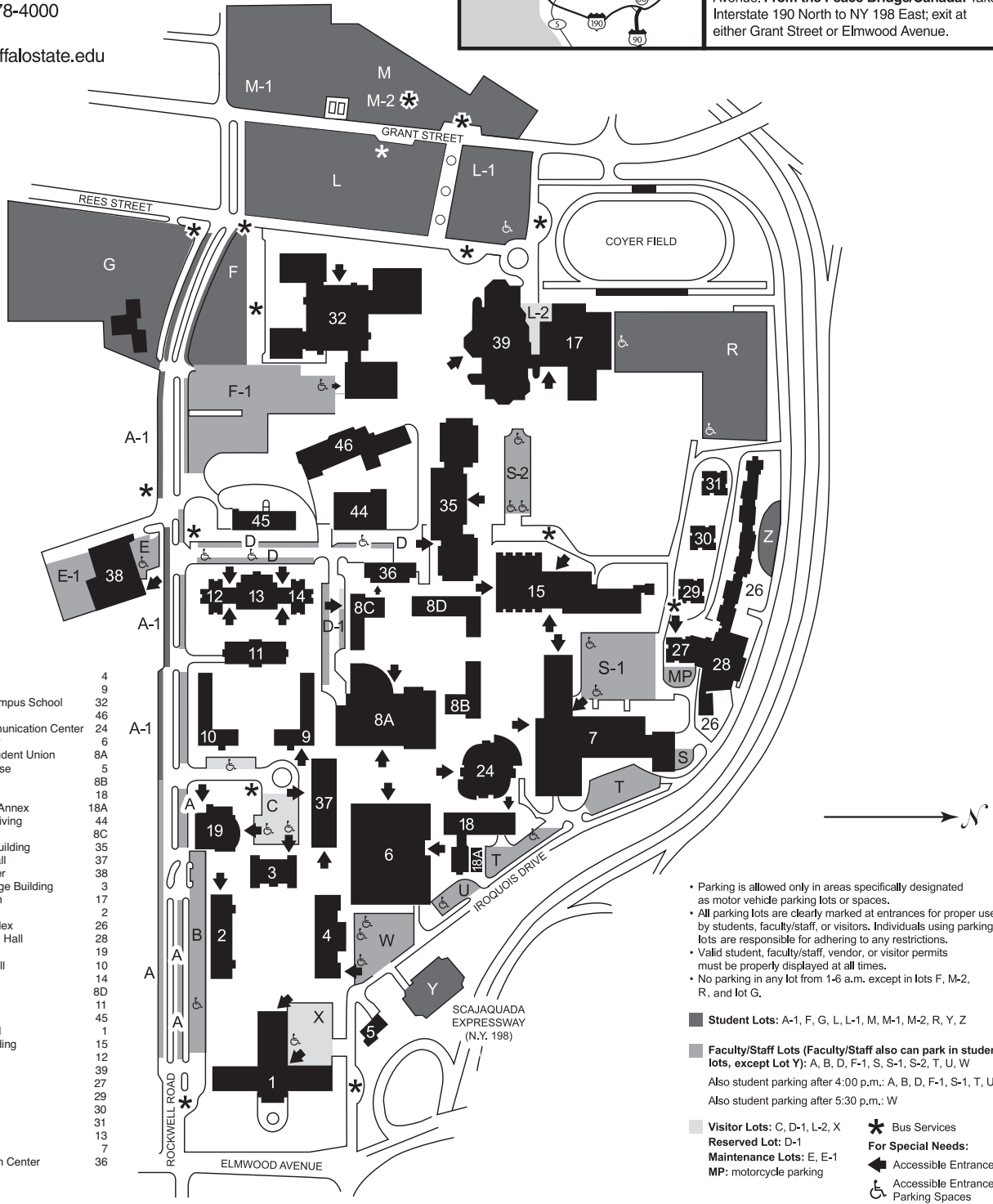
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How to get to Buffalo State by car:

From the east (via the NYS Thruway/Interstate 90): Take Exit 51 (NY 33 West) to NY 198 West. Exit NY 198 at Elmwood Avenue South. The college is immediately on the right. **From the west or south (via the NYS Thruway/Interstate 90):** Take Exit 53 (Interstate 190) to NY 198 East; exit at either Grant Street or Elmwood Avenue. **From the north/Niagara Falls:** Take Interstate 190 South (over the Grand Island Bridge) to NY 198 East; exit at either Grant Street or Elmwood Avenue. **From the Peace Bridge/Canada:** Take Interstate 190 North to NY 198 East; exit at either Grant Street or Elmwood Avenue.



Map Legend

Bacon Hall	4
Bishop Hall	9
Buckham Campus School	32
Building 46	46
Bulger Communication Center	24
Butler Library	6
Campbell Student Union	8A
Campus House	5
Cassety Hall	8B
Caudell Hall	18
Caudell Hall Annex	18A
Central Receiving	44
Chase Hall	8C
Classroom Building	35
Cleveland Hall	37
Clinton Center	38
Donald Savage Building	3
Houston Gym	17
Ketchum Hall	2
Moore Complex	26
Moore Dining Hall	28
Moot Hall	19
Neumann Hall	10
North Wing	14
Perry Hall	8D
Porter Hall	11
Power Plant	45
Rockwell Hall	1
Science Building	15
South Wing	12
Sports Arena	39
Tower 1	27
Tower 2	29
Tower 3	30
Tower 4	31
Twin Rise	13
Upton Hall	7
Weigel Health Center	36

- Parking is allowed only in areas specifically designated as motor vehicle parking lots or spaces.
 - All parking lots are clearly marked at entrances for proper use by students, faculty/staff, or visitors. Individuals using parking lots are responsible for adhering to any restrictions.
 - Valid student, faculty/staff, vendor, or visitor permits must be properly displayed at all times.
 - No parking in any lot from 1-6 a.m. except in lots F, M-2, R, and lot G.
- **Student Lots:** A-1, F, G, L, L-1, M, M-1, M-2, R, Y, Z
 - **Faculty/Staff Lots (Faculty/Staff also can park in student lots, except Lot Y):** A, B, D, F-1, S, S-1, S-2, T, U, W
Also student parking after 4:00 p.m.: A, B, D, F-1, S-1, T, U
Also student parking after 5:30 p.m.: W
 - **Visitor Lots:** C, D-1, L-2, X
 - **Reserved Lot:** D-1
 - **Maintenance Lots:** E, E-1
 - **MP:** motorcycle parking
- ★ **Bus Services**
 - ★ **For Special Needs:**
 - ◀ Accessible Entrances
 - ♿ Accessible Entrances Parking Spaces

June 2007

INDEX

Academic misconduct	10	Complaints, grievances, and appeals, student	13	History programs	51–52	Student Union (see Campbell Student Union)	
Academic policies	10	Computing and Technology Services	24	Human resource development program	52	Summer Session (financial aid)	20
Academic probation and dismissal	10	Continuing Professional Studies	24	Immunization requirement	12	Summer Session (tuition and fees)	17
Academic requirements	8	Continuous enrollment policy	8	Independent study	11	SUNY Graduate Diversity Fellowship Program	20
Accreditations	3	Costs, estimated annual	17	Industrial technology program	53	Teacher Certification Office	27
Administration	97	Counseling Center	24	Intercollegiate Athletics	25	Teacher (tuition) waiver certificates	18
Admission to a graduate program	5–6	Course by contract	10	International and Exchange Office	26	Teaching bilingual exceptional individuals program	62
Adult education programs	30	Course descriptions	68	International applicants	6	Technology education programs	67
Advisement	12	Course load	11	International Center for Studies in Creativity	25	Time limit for degree completion	9
Aid disbursement	22	Creative studies program	42	Library, E. H. Butler (see Butler Library, E. H.)		Time payment plan (tuition)	17
Aid for students with disabilities	20	Creativity and change leadership program	43	Literacy specialist programs	53	Transcripts	7, 13, 18
Aid to Native Americans	20	Credit hours (units of credit)	13	Maps, campus	102–103	Transcripts, incomplete	7
Alternative methods of earning credit	10	Criminal justice program	43	Mathematics education programs	54–55	Transfer credit	9
Application deadlines	6	Cross registration	11	Matriculation, program	5, 20	Tuition Assistance Program (TAP)	19, 20, 21
Application procedures	6–7	Dean of Students	24	Multidisciplinary studies programs	56	Tuition refunds	18
Application procedures, financial aid	19	Dining Services, Campus	23	Museum studies concentration, history program with	52	Tuition	16
Applied economics program	30	Disability Services Office	24	Museum studies program	57	Undergraduate enrollment in graduate courses	5
Art conservation programs	31	Early childhood education programs	44–45	Overawards (financial aid)	22	University Police	27
Art education programs	32	Earth science education programs	46–47	Parking rules and regulations	27	Veterans benefits	20, 27
Assessment	15	Economics program (see applied economics program)		Performing Arts Center at Rockwell Hall	26	Veterans Certification Office	27
Auditing courses	11	Educational computing program	48	Physics education programs	58	Weigel Health Center	27
Award notification, financial aid	21	Educational leadership program	48	Planetarium, Whitworth Ferguson (see Whitworth Ferguson Planetarium)		Whitworth Ferguson Planetarium	27
Barnes & Noble at Buffalo State Bookstore	23	Electronic Learning Office	25	Police, University (see University Police)		Withdrawal from college (financial aid)	22
Biology education programs	33–34	English education programs	49–50	Programs, graduate (see graduate programs at Buffalo State College)		Withdrawal from course(s)	12
Biology program	33	English program	49	Projects, theses, and comprehensive examinations	9		
Bookstore, Barnes & Noble (see Barnes & Noble at Buffalo State)		EOP, HEOP, SEEK (see Graduate Tuition Scholarship Opportunity)		Readmission to graduate study	7		
Buffalo State College, about	4	Faculty, graduate	98	Refund policies	17		
Burchfield-Penney Art Center	23	Family Educational Rights and Privacy Act (FERPA)	15	Registration	12		
Business and marketing education programs	35–36	Federal student aid	19	Religious beliefs, students unable to attend classes because of	14		
Butler Library, E. H.	25	Federal Work-Study	21	Repeating courses	12		
Campbell Student Union	23	Fees	16	Research Foundation at Buffalo State College	26		
Candidacy	8	Fees, service	18	Residence Life Office (on-campus housing)	26		
Career and technical education programs	36–37	Finances	16	Room and board	17		
Career Development Center	23	Financial aid	19–22	Satisfactory academic progress (financial aid)	21		
Carnegie Academy for the Scholarship of Teaching and Learning	23	French education program	50	Scholarships	22		
Center for Excellence in Urban and Rural Education	24	Grade point average (GPA)	11	Service fees (see fees, service)			
Certification in education, initial/permanent/professional	9	Grading	11	Services and facilities	23		
Change of major	7	Graduate assistantships	20	Social studies education programs	59–60		
Change of name or address	12	Graduate programs at Buffalo State College	2, 28, 29	Spanish education program	61		
Chemistry education programs	37–38	Graduate Tuition Scholarship Opportunity (EOP, HEOP, SEEK)	19	Special education programs	62		
Child Care Center, Buffalo State College	24	Graduation/Commencement	8	Speech-language pathology program	65		
Childhood and early childhood curriculum and instruction program	39	Great Lakes Center	25	Speech-Language-Hearing Clinic	26		
Childhood education programs	40–41	Health Center, Weigel (see Weigel Health Center)		State University of New York (SUNY)	4		
Commencement (see graduation/commencement)		Health insurance, mandatory student	17	Student personnel administration program	65		
		History program with museum studies concentration	52				

TELEPHONE NUMBERS

Academic and Student Affairs Office	(716) 878-5550
Barnes & Noble at Buffalo State Bookstore.	(716) 878-5509
Burchfield-Penney Art Center.	(716) 878-6011
Campbell Student Union	(716) 878-6511
Campus Dining Services.	(716) 878-5214
Career Development Center	(716) 878-5811
Child Care Center.	(716) 878-5335
Computing and Technology Services	(716) 878-4611
Continuing Professional Studies	(716) 878-5907
Counseling Center	(716) 878-4436
Disability Services Office	(716) 878-4500
E. H. Butler Library	(716) 878-6300
Financial Aid Office	(716) 878-4902
Graduate School	(716) 878-5601
Great Lakes Center	(716) 878-4329
International and Exchange Office	(716) 878-4620
Performing Arts Center at Rockwell Hall	(716) 878-3032
Registrar's Office	(716) 878-4811
Residence Life Office	(716) 878-3000
Student Accounts Office	(716) 878-4121
Teacher Certification Office	(716) 878-6121
University Police	(716) 878-6333
Veterans Certification Office	(716) 878-5045
Weigel Health Center	(716) 878-6711

School of Arts and Humanities

Dean's Office	(716) 878-6326
Art Conservation Department	(716) 878-5025
Art Education Department	(716) 878-4106
Communication Department	(716) 878-6008
Design Department	(716) 878-6032
English Department	(716) 878-5416
Fine Arts Department	(716) 878-6014
Interior Design Department	(716) 878-6032
Modern and Classical Languages Department	(716) 878-5414
Music Department	(716) 878-6401
Philosophy and Humanities Department	(716) 878-5136
Theater Department	(716) 878-6416

School of Education

Dean's Office	(716) 878-4214
Educational Foundations Department	(716) 878-4303
Elementary Education and Reading Department	(716) 878-5916
Exceptional Education Department	(716) 878-5317

School of Natural and Social Sciences

Dean's Office	(716) 878-6434
Anthropology Department	(716) 878-6110
Biology Department	(716) 878-5203
Chemistry Department	(716) 878-5204
Earth Sciences and Science Education Department	(716) 878-6731
Economics and Finance Department	(716) 878-4606
Geography and Planning Department	(716) 878-6216
History and Social Studies Education Department.	(716) 878-5412
Mathematics Department	(716) 878-5621
Physics Department	(716) 878-6726
Political Science Department	(716) 878-6116
Psychology Department	(716) 878-6215
Sociology Department	(716) 878-5411

School of the Professions

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Computer Information Systems Department	(716) 878-5528
Creative Studies Department	(716) 878-6223
Criminal Justice Department	(716) 878-4517
Dietetics and Nutrition Department	(716) 878-5913
Health and Wellness Department	(716) 878-6501
Hospitality and Tourism Department	(716) 878-5913
Social Work Department	(716) 878-5705
Speech-Language Pathology Department	(716) 878-5502
Student Personnel Administration Department	(716) 878-3789
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