Graduate Major Programs

Adolescence Education, Social Studies (MSED with Initial Certification)

Master of Science in Education Program with Initial Certification Program Code: MSED-AS

Major Code:

History and Social Studies Education Department Cassety Hall 302 (716) 878-5412 history.buffalostate.edu/

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in all other states</u>

The MSED with initial certification program is a secondary social studies education program at the graduate level for candidates whose undergraduate degrees were in subjects related to the social studies content they wish to teach, but whose preparation in those subjects did not lead to a teaching credential. Full time study in the MSED allows candidates (who meet the history/social science requirements from their undergraduate programs or supplemental coursework) to complete their requirements for initial certification and qualify for professional certification in approximately 4 semesters including the culminating project and research requirements. The MSED offers 12 credits of foundational professional education content which includes adolescent psychology, literacy, and exceptionality and is offered through the various departments within the School of Education. An additional 27 credits of foundational social studies education content and 12 credits of student teaching are offered through the department of History and Social Studies Education within the School of Arts and Sciences. Also, the program includes the child abuse identification and reporting workshop; dignity for all students act workshop; schools against violence education workshop; fire and arson safety workshop; and alcohol and other drugs workshop. This MSED leads to a NYS certification in social studies for grades 7-12.

The following are the primary teacher candidate outcomes:

- 1. Content The teacher candidate will know the social studies subject matter to be taught to grades 7-12 learners.
- 2. *Learner* The teacher candidate will understand grades 7-12 learners' socialization, growth and development; the learning process; reflection of teaching; and the establishment of a classroom climate that facilitates learning.
- 3. *Pedagogy* The teacher candidate will attain an understanding of the strategies that they will use to teach all grades 7-12 learners.
- 4. *Technology* The teacher candidate will use technology as a vehicle for grades 7-12 learners to acquire information, practice skills, use higher order thinking skills, and participate in collaborative projects.
- 5. *Reflection* The teacher candidate will exhibit the ability to reflect and assess his/her own effectiveness, and to systematically make adjustments to improve and strengthen areas needing attention.
- 6. *Dispositions* The teacher candidate will demonstrate respect for grades 7-12 learner differences, commitment to own personal growth, and engagement in short and long-term planning.
- 7. *Diversity* The teacher candidate will be aware of and sensitive to diversity issues and to use culturally and socially responsive pedagogy with grades 7-12 learners.

Advisement: Each student is assigned an academic adviser. It is imperative that teacher candidates regularly consult with their advisers.

Teacher candidates should consult the <u>Teacher Certification website</u> for current seminars and workshops.

Admission Requirements

- 1. A bachelor's degree from an accredited college or university with a 36-credit concentration in history and/or social science courses which includes economics, government, and a minimum of 30 credit hours of study in the history and geography of the United States and the world. Only grades of C or higher are accepted.¹
- 2. A minimum cumulative GPA of 3.0 (4.0 scale).
- 3. Two years of high school or two semesters of college or university study in one world language.

Program Requirements

Required Courses		
Professional Education Cour	rses (36 credit hours)	
SSE 500	INTRODUCTION TO SOCIAL STUDIES EDUCATION	3
SSE 602	HIGH SCHOOL SOCIAL STUDIES INSTRUCTION	3
SSE 513	SEMINAR IN SECONDARY SOCIAL STUDIES	3
EDU 609	RESEARCH AND PRACTICE IN ADOLESCENT LITERACY	3
SSE 603	MIDDLE SCHOOL SOCIAL STUDIES INSTRUCTION	3
SSE 655	SOCIAL STUDIES LABORATORY	3
SSE 632	TEACHING WITH HISTORIC PLACES	3
EDU 606	LITERACY AND INSTRUCTION FOR CULTURALLY AND LINQUISTICALLY DIVERSE STUDENTS	3
SSE 502	TEACHING SOCIAL STUDIES	3
EXE 500	INDIVIDUALS WITH SPECIAL NEEDS	3
SPF 529	ADOLESCENT PSYCHOLOGY	3
SSE 671	TECHNOLOGY IN THE SOCIAL STUDIES CLASSROOM	3
Research Course (3 credit hours)		
Select one from the following:		
SSE 689	RESEARCH METHODS AND TECHNIQUES IN SECONDARY SOCIAL STUDIES	3
SSE 595	RESEARCH METHODS IN SECONDARY SOCIAL STUDIES	3
SPF 689	METHODS AND TECHNIQUES OF EDUCATIONAL RESEARCH	3

Field Experience and Student Teaching Requirements (12 credit hours)

¹ Prospective teacher candidates can complete any deficiencies in the 36-credit concentration in history and/or social science, and world language coursework while enrolled in the program but before they are eligible to student teach.

SSE 611	STUDENT TEACHING OF SOCIAL STUDIES IN THE HIGH SCHOOL	6
SSE 609	STUDENT TEACHING OF SOCIAL STUDIES IN THE MIDDLE SCHOOL	6
Graduate Projec	ct or Comprehensive Examination (0 credit hours)	
Select one from	the following:	0
Graduate Projec	rt	0
Comprehensive	Examination	0
Total Credit Hou	ırs	51

Student Learning Outcomes

- 1. The Learner and Learning Candidates will use understanding of adolescent development, individual differences and diverse cultures to ensure inclusive, student-centered learning environments that enable each learner to meet high standards.
- 2. The Content Candidates will demonstrate understanding of central concepts, tools of inquiry, and structures of disciplines to be taught and be able to connect concepts to engage learners in critical thinking, creativity and collaborative problem solving related to authentic issues.
- 3. The Teacher and Teaching Candidates will use multiple methods of assessment, plan instruction that supports every student in meeting rigorous learning goals and use varied an innovative instructional strategy to encourage learners to develop deep understanding of content.
- 4. The Profession and Professional Dispositions Candidates will engage in ongoing professional learning, use evidence to reflect on their own practice, seek appropriate leadership roles and collaborate with families, colleagues, and the community to advance the profession.

Adolescence Education, Social Studies with 5-6 Extension (MSED with Initial Certification)

Master of Science in Education Program with Initial Certification Program Code: MSED-AS Major Code:

History and Social Studies Education Department Cassety Hall 302 (716) 878-5412 history.buffalostate.edu/

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in</u> all other states

The MSED with initial certification program is a secondary social studies education program at the graduate level for candidates whose undergraduate degrees were in subjects related to the social studies content they wish to teach, but whose preparation in those subjects did not lead to a teaching credential. Full time study in the MSED allows candidates (who meet the history/social science requirements from their undergraduate programs or supplemental coursework) to complete their requirements for initial certification and qualify for professional certification in approximately 4 semesters including the culminating project and research requirements. The MSED offers 12 credits of foundational professional education content which includes adolescent psychology, literacy, and exceptionality and is offered through the various departments within the School of Education. An additional 27 credits of foundational social studies education content and 15 credits of student teaching are offered through the department of History and Social Studies Education within the School of Arts and Sciences. Also, the program includes the child abuse identification and reporting workshop; dignity for all students act workshop; schools against violence education workshop; fire and arson safety

workshop; and alcohol and other drugs workshop. This MSED leads to a NYS certification in social studies for grades 7-12 with the 5-6 extension.

The following are the primary teacher candidate outcomes:

- 1. Content The teacher candidate will know the social studies subject matter to be taught to grades 5-12 learners.
- 2. *Learner* The teacher candidate will understand grades 5-12 learners' socialization, growth and development; the learning process; reflection of teaching; and the establishment of a classroom climate that facilitates learning.
- 3. Pedagogy The teacher candidate will attain an understanding of the strategies that they will use to teach all grades 5-12 learners.
- 4. *Technology* The teacher candidate will use technology as a vehicle for grades 5-12 learners to acquire information, practice skills, use higher order thinking skills, and participate in collaborative projects.
- 5. *Reflection* The teacher candidate will exhibit the ability to reflect and assess his/her own effectiveness, and to systematically make adjustments to improve and strengthen areas needing attention.
- 6. *Dispositions* The teacher candidate will demonstrate respect for grades 5-12 learner differences, commitment to own personal growth, and engagement in short and long-term planning.
- 7. *Diversity* The teacher candidate will be aware of and sensitive to diversity issues and to use culturally and socially responsive pedagogy with grades 5-12 learners.

Advisement: Each student is assigned an academic adviser. It is imperative that teacher candidates regularly consult with their advisers.

Teacher candidates should consult the Teacher Certification website for current seminars and workshops.

Admission Requirements

- 1. A bachelor's degree from an accredited college or university with a 36-credit concentration in history and/or social science courses which includes economics, government, and a minimum of 30 credit hours of study in the history and geography of the United States and the world. Only grades of C or higher are accepted.²
- 2. A minimum cumulative GPA of 3.0 (4.0 scale).
- 3. Two years of high school or two semesters of college or university study in one world language.

Required Courses			
Profession	Professional Education Courses (36 credit hours)		
SSE 500	INTRODUCTION TO SOCIAL STUDIES EDUCATION	3	
SSE 602	HIGH SCHOOL SOCIAL STUDIES INSTRUCTION	3	
SSE 513	SEMINAR IN SECONDARY SOCIAL STUDIES	3	
EDU 609	RESEARCH AND PRACTICE IN ADOLESCENT LITERACY	3	
SSE 603	MIDDLE SCHOOL SOCIAL STUDIES INSTRUCTION	3	
SSE 655	SOCIAL STUDIES LABORATORY	3	
SSE 632	TEACHING WITH HISTORIC PLACES	3	
EDU 606	LITERACY AND INSTRUCTION FOR CULTURALLY AND LINQUISTICALLY DIVERSE STUDENTS	3	

² Prospective teacher candidates can complete any deficiencies in the 36-credit concentration in history and/or social science, and world language coursework while enrolled in the program but before they are eligible to student teach.

SSE 502	TEACHING SOCIAL STUDIES	3	
EXE 500	INDIVIDUALS WITH SPECIAL NEEDS	3	
SPF 529	ADOLESCENT PSYCHOLOGY	3	
SSE 671	TECHNOLOGY IN THE SOCIAL STUDIES CLASSROOM	3	
Research (Course (3 credit hours)		
Select one	from the following:		
SSE 689	RESEARCH METHODS AND TECHNIQUES IN SECONDARY SOCIAL STUDIES	3	
SSE 595	RESEARCH METHODS IN SECONDARY SOCIAL STUDIES	3	
SPF 689	METHODS AND TECHNIQUES OF EDUCATIONAL RESEARCH	3	
Field Expe	rience and Student Teaching Requirements (15 credit hours)		
SSE 611	STUDENT TEACHING OF SOCIAL STUDIES IN THE HIGH SCHOOL		6
SSE 609	STUDENT TEACHING OF SOCIAL STUDIES IN THE MIDDLE SCHOOL		6
SSE 688	INTERNSHIP		3
Graduate	Project or Comprehensive Examination (0 credit hours)		
Select one	from the following:	0	
Graduate	Project		0
Comprehe	nsive Examination		0
Total Cred	it Hours	54	

Student Learning Outcomes

- 1. The Learner and Learning Candidates will use understanding of adolescent development, individual differences and diverse cultures to ensure inclusive, student-centered learning environments that enable each learner to meet high standards.
- 2. The Content Candidates will demonstrate understanding of central concepts, tools of inquiry, and structures of disciplines to be taught and be able to connect concepts to engage learners in critical thinking, creativity and collaborative problem solving related to authentic issues.
- 3. The Teacher and Teaching Candidates will use multiple methods of assessment, plan instruction that supports every student in meeting rigorous learning goals and use varied an innovative instructional strategy to encourage learners to develop deep understanding of content.
- 4. The Profession and Professional Dispositions Candidates will engage in ongoing professional learning, use evidence to reflect on their own practice, seek appropriate leadership roles and collaborate with families, colleagues, and the community to advance the profession.

Adult Education (M.S.)

Master of Science Program Program Code: MS-ED Major Code: ADE

Higher Education Administration and Adult Education Department Bacon Hall 214C, (716) 878-3789 hea.buffalostate.edu/

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. This program does not lead to teaching certification.

The master's program is offered 100% online.

Admission Requirements

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).

A letter describing the applicant's interest in the field and experience with teaching or administering adult programs.

Applicants may be asked to participate in a phone or online interview at the discretion of the adult education coordinator.

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

Application Deadline

Applications are accepted and reviewed on a rolling basis.

Program Requirements

Required Courses (21 credit hours)		
ADE 500	INTRODUCTION TO ADULT EDUCATION	3
ADE 600	ADULTHOOD AND DEVELOPMENT	3
ADE 605	HISTORICAL, SOCIAL, AND PHILOSOPHICAL FOUNDATIONS OF ADULT EDUCATION	3
ADE 608	INSTRUCTIONAL DESIGN AND ASSESSMENT	3
ADE 610	METHODS OF ADULT EDUCATION	3
ADE 655	DIVERSITY ISSUES IN ADULT EDUCATION AND TRAINING	3
ADE 695	METHODS AND TECHNIQUES OF EDUCATIONAL RESEARCH	3
Elective Field Specialization Courses (9 credit hours)		
Select three content courses plus comprehensive examination		9
Total Credit Hours		30

Graduation Requirements

A minimum of 30 credit hours completed with a minimum cumulative 3.0 GPA including 9 hours in an elective field specialization, selected under advisement. The 9-credit field specialization is developed by each student and his or her academic advisor to

incorporate courses from related academic disciplines. Examples of field specializations include administration, literacy, English as a second language, job development, workplace learning and staff development, vocational education, counseling, human resource development, student personnel administration, community activism, creativity, exceptionality, criminal justice, health and wellness, educational computing, hospitality and business. The field specialization could also include an internship for those students with minimal adult education experience.

Students also must complete a written comprehensive examination as a culminating requirement.

Applied Behavior Analysis (M.S.)

Master of Science Program Code: MSED-EP Major Code: ABA

Exceptional Education Department Ketchum Hall 204 (716) 878-3038 exceptionaleducation.buffalostate.edu/

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in all other states</u>

This master's level program is designed to serve the educational needs of professionals who provide behavioral health treatment for individuals with autism and autism spectrum disorders and related needs. This program consists of a minimum of 33 credits. It is designed to address the essential skills and competencies for professional practitioners in the field of Applied Behavior Analysis. Completion of this program leads to recommendation for New York State Licensure as a Behavior Analyst (LBA) and recommendation as a Board certified Behavior Analysis from the Behavior Analysis Certification Board (BCBA). Candidates must possess an undergraduate degree in psychology, education or other subject areas that address learning and behavioral change.

Admission Requirements

- 1. Official college transcripts.
- 2. Three professional references from individuals who can attest to your potential success in this program (letters are not required).
- 3. A Statement of Intent.
- 4. Minimum 3.0 undergraduate or current GPA.

Required Courses (30 credit hours)			
EXE 522	BEHAVIORAL ASSESSMENT, INSTRUCTION AND INTERVENTION	3	
EXE 544	BEHAVIORAL INTERVENTIONS FOR STUDENTS WITH CHALLENGING BEHAVIORS	3	
EXE 634	APPLIED BEHAVIOR ANALYSIS	3	
EXE 644	ADVANCED APPLIED BEHAVIOR ANALYSIS	3	
EXE 645	EFFECTIVE PRACTICES FOR SUPPORTING INDIVIDUALS WITH AUTISM SPECTRUM DISORDER	3	
EXE 646	CULTURE, DIVERSITY, DISABILITY, AND EDUCATION	3	
EXE 681	CLINICAL RECORDS AND ETHICAL PRACTICES FOR BEHAVIORAL ANALYSIS	3	

EXE 683	SUPERVISED PRACTICUM: PERSONNEL SUPERVISION AND MANAGEMENT	6
EXE 684	PRACTICE-BASED RESEARCH IN EXCEPTIONAL EDUCATION	3
EXE 690	MASTER'S PROJECT IN EXCEPTIONAL EDUCATION	3
Total Credit Hours		33

Applied Economics (M.A.)

Master of Arts Program Program Code: MA-AS Major Code: AEC

Economics and Finance Department Cassety Hall 248 (716) 878-4606 economics.buffalostate.edu/

The master of arts in applied economics is designed for students who want to gain an in-depth knowledge of modern 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 integrates real-world application with the latest theory and enhances opportunities for graduates in a broad range of occupations and institutions; the program also has prepared students for continued education at the Ph.D. level. In addition, it has prepared students to take the Chartered Financial Analyst (CFA) exam.

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 an appropriate minimum score on the Graduate Record Exam (GRE), attain an appropriate minimum score 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.

Program Requirements

Required Courses (12 credit hours)		
ECO 505	HISTORY OF ECONOMIC THOUGHT	3
ECO 507	APPLIED MICROECONOMIC THEORY	3
ECO 508	APPLIED MACROECONOMIC THEORY	3
ECO 524	APPLIED ECONOMETRICS	3
Suggested Content Specialty Courses		

Economic Policy Analysis Courses

Select three from the following:		9
ECO 600	LABOR ECONOMICS	
ECO 604	DEVELOPMENT ECONOMICS	
ECO 610	ECONOMICS OF EDUCATION	
ECO 612	URBAN ECONOMIC ANALYSIS	
ECO 650	PUBLIC FINANCE	
ECO 660	COST-BENEFIT ANALYSIS	
ECO 693	SEMINAR IN HETERODOX ECONOMICS	
Financial Economics Courses		
Select three from the following:		9
ECO 650	PUBLIC FINANCE	
FIN 619	RISK MANAGEMENT	
FIN 622	CAPITAL MARKETS	
FIN 630	INTERNATIONAL FINANCE	
FIN 645	ESTATE PLANNING AND TAXATION	
FIN 692	SEMINAR IN FINANCIAL ECONOMICS	
Other Elective Courses (3-9 credit hours) ¹		
Select 3-9 credit hours from the following:		3-9
ECO 502	WORKSHOP IN ECONOMIC EDUCATION	
ECO 510	ECONOMICS OF EDUCATION	
ECO/INT 601	ENGINEERING ECONOMY	
ECO 515	NYS GOVERNMENT AND BUDGETING	
ECO 587	TOPICS IN ECONOMICS	
ECO 590	INDEPENDENT STUDY	
ECO 688	INTERNSHIP	
FIN 587	TOPICS IN FINANCE	
FIN 588	INDEPENDENT STUDY	
FIN 688	INTERNSHIP	

Master's Project, Master's Thesis, or Comprehensive Examination (3 credit hours)		
Select one from the following:		3
ECO 690	MASTER'S PROJECT (1-6)	
ECO 695	MASTER'S THESIS (1-6)	
Comprehensive Examination		
Total Credit Hours		30

¹ Selected under advisement.

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.

Students will:

- 1. understand the historical development of economic concepts in relation to social policy needs.
- 2. understand how different schools of thought shape the approach to the assessment of economic issues.
- 3. understand and use theoretical economic models to facilitate research in economics and finance.
- 4. understand and apply selected quantitative methods of economic analysis.
- 5. be able to undertake economic and finance research and to derive policy implications.

Applied Psychology, B.A and Applied Behavior Analysis, M.S. Combined Pathway

Bachelor of Arts Program Program Code: BA-AS Major Code: PYA

Psychology Department Buckham Hall A238 (716) 878-6215 psychology.buffalostate.edu/

Master of Science Program Code: MSED-EP Major Code: ABA

Exceptional Education Department Ketchum Hall 204 (716) 878-3038 exceptionaleducation.buffalostate.edu/

Enrollment in this combined pathway allows highly qualified, currently-enrolled SUNY Buffalo State students to begin work on a M.S. degree in Applied Behavior Analysis (ABA) while completing a B.A. degree in Applied Psychology. Twelve (12) credits of designated master's courses would be incorporated into the B.A. program and count toward both the bachelor's degree and the master's degree.

Admission Requirements

Admission into the combined pathway is highly selective. Matriculated undergraduate students may apply to the BA/MS pathway in their junior year and will complete all of the application requirements for the program. The admission application process includes a minimum GPA of 3.0 overall and in Psychology, a statement of intent, and names of 3 references.

General Education 22 Bossis	ements	
General Education 23 Requir 33 credit hours	CHICHG	22
		33
Psychology Major Requireme		
Required Courses (12 credit l	hours)	
PSY 101	INTRODUCTION TO PSYCHOLOGY	3
PSY 350	STATISTICS IN PSYCHOLOGICAL RESEARCH ¹	3
PSY 360	EVALUATING PSYCHOLOGICAL SCIENCE	3
PSY 468	PROFESSIONAL SKILLS IN PSYCHOLOGY	3
Note: PSY 350, PSY 360 and F	PSY 468 must be taken in sequence.	
Content Courses (15 credit ho	ours)	
	urse from each of the following groups. The prerequisite for all 300-level courses or better, unless otherwise noted.	15
Biological and Cognitive Psyc	hology	
PSY 304	LEARNING: THEORY AND RESEARCH	
PSY 308	SENSATION AND PERCEPTION	
PSY 321	COMPARATIVE ANIMAL BEHAVIOR	
PSY 330	THE PSYCHOLOGICAL POWER OF LANGUAGE	
PSY 333	BRAIN AND BEHAVIOR	
PSY 340	COGNITIVE PSYCHOLOGY	
Social/Personality Psycholog	у	
PSY 311	PERSONALITY: THEORY AND RESEARCH	
PSY 325	SOCIAL BEHAVIOR	
Developmental Psychology		
PSY 301	PERSPECTIVES ON CHILD ABUSE AND ADVOCACY	
PSY 355	LIFESPAN DEVELOPMENTAL PSYCHOLOGY	
PSY 356	CHILD DEVELOPMENT	
PSY 357	ADOLESCENT AND YOUNG ADULT DEVELOPMENT	
Clinical Psychology		

PSY 392	ABNORMAL PSYCHOLOGY ²	
Applied Psychology and Diversit	У	
PSY 365	PSYCHOLOGY IN THE WORKPLACE	
PSY 367	ORGANIZATIONAL BEHAVIOR	
PSY 370	ENVIRONMENTAL PSYCHOLOGY I	
PSY 375	FORENSIC PSYCHOLOGY	
PSY 376	HEALTH PSYCHOLOGY	
PSY 379	PSYCHOLOGY OF MONEY	
PSY 381	PSYCHOLOGY OF CULTURE	
PSY 382	PSYCHOLOGY OF THE CONSUMER	
PSY 383	THE PSYCHOLOGY OF HUMAN SEXUAL BEHAVIOR	
PSY 387	PSYCHOLOGY OF GENDER	
PSY 388	PSYCHOLOGY OF DEATH AND DYING	
Advanced and Electives Selected	by Advisement (9 credit hours)	
PSY 310	BEHAVIOR MODIFCATION	3
Two 400 level PSY electives (3 cm	redits each)	6
Service Learning/Internship		
As part of the Required Course (learning, PSY 488 Internship or F	Content or Advanced and Elective courses, students must complete one PSY service- PSY 495 Special Project course.	
Required Graduate Courses		12
Students must complete each of	the following EXE courses during senior year of Applied Psychology BA	
EXE 522	BEHAVIORAL ASSESSMENT, INSTRUCTION AND INTERVENTION	
EXE 544	BEHAVIORAL INTERVENTIONS FOR STUDENTS WITH CHALLENGING BEHAVIORS	
EXE 634	APPLIED BEHAVIOR ANALYSIS ³	
EXE 681	CLINICAL RECORDS AND ETHICAL PRACTICES FOR BEHAVIORAL ANALYSIS	
All College Electives		39
Total Credit Hours		120
Applied Behavior Analysis MS Re	equirements (33 credit Hours)	
Prerequisite: Graduate standing	is required for each of the following	

EXE 522	BEHAVIORAL ASSESSMENT, INSTRUCTION AND INTERVENTION	3
EXE 544	BEHAVIORAL INTERVENTIONS FOR STUDENTS WITH CHALLENGING BEHAVIORS	3
EXE 634	APPLIED BEHAVIOR ANALYSIS ³	3
EXE 681	CLINICAL RECORDS AND ETHICAL PRACTICES FOR BEHAVIORAL ANALYSIS	3
EXE 644	ADVANCED APPLIED BEHAVIOR ANALYSIS ⁴	3
EXE 645	EFFECTIVE PRACTICES FOR SUPPORTING INDIVIDUALS WITH AUTISM SPECTRUM DISORDER	3
EXE 646	CULTURE, DIVERSITY, DISABILITY, AND EDUCATION	3
EXE 673	PERSONNEL SUPERVISION AND MANAGEMENT ⁵	3
EXE 683	SUPERVISED PRACTICUM: PERSONNEL SUPERVISION AND MANAGEMENT ⁶	3
EXE 684	PRACTICE-BASED RESEARCH IN EXCEPTIONAL EDUCATION ⁷	3
EXE 690	MASTER'S PROJECT IN EXCEPTIONAL EDUCATION	3
Total Graduate Credit Hours		33

¹ Prerequisite: At least sophomore status; Completion of the Mathematics and Quantitative Reasoning General Education requirement – only a MAT course at MAT 114 or higher.

- ² Prerequisite: PSY 101 with a Grade of C or higher and 3 additional hours of psychology.
- ³ Prerequisite: EXE 500 or EXE 100 or instructor permission.
- ⁴ Prerequisite: EXE 634.
- ⁵ Prerequisite: EXE 644.
- ⁶ Prerequisite: EXE 673.
- ⁷ Prerequisite: Completion of all core courses except the research requirement and a minimum of 9 hours of coursework from the specialized program.

Students will:

- 1. Critically evaluate existing literature in a given topic area of psychology.
- 2. Generate a scientific hypothesis in a given area of psychology.
- 3. Demonstrate understanding of basic research designs used in psychology and related mental health fields,
- 4. Utilize appropriate statistical techniques for a given research design.
- 5. Apply valid conclusions based on topic area, hypothesis, review of literature, and study outcomes.

Art Education (M.S.Ed.)

Master of Science in Education Program Program Code: MSED-AS Major Code: AED

Art and Design Department Upton Hall 402 (716) 878-6032 artdesign.buffalostate.edu/art-education

Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in</u> all other states

The Art Education Graduate Program prepares students for professional certification to teach visual arts in pre-kindergarten through grade 12 (PK-12) in New York State schools. This program develops art education professionals who:

- understand contemporary art and culture and are committed to teaching students in meaningful and critical ways.
- consider teaching to be a dynamic and continuing process utilizing current media technology.
- are sensitive to issues of diversity and capable of adapting their teaching strategies to meet individual needs.
- are encouraged to be active in their professional, cultural, and art communities.
- are competent in theory, research, and methodology in art and art education.

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 professional certification to teach visual art in grades pre-kindergarten–12 (PK-12). This program requires 30 credit hours of study. Within the required program format, students are encouraged to pursue individualized programs of study.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

*Those seeking an art education initial certification, please see our Postbaccalaureate Certification-only Program.

Advisement

Academic advisers are assigned by the department and must be consulted each semester in order to register for courses and graduate in a timely manner; however, students remain responsible for fulfilling department and college requirements specific to the program.

Admission Requirements

- 1. A bachelor's degree in a visual art-related field as well as initial certification in art education from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale).
- 2. Writing Sample: a 500-1000 word sample of your best writing on an area pertaining to art education.
- 3. An interview with the Art Education Department chair.
- 4. A bachelor's degree in a visual art-related field from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale) as well as NYS initial teacher certification in Visual Arts.

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.

Required Courses (9-12 credit hours)		
AED 688	SEMINAR IN ART EDUCATION	3
AED 689	RESEARCH	3
AED 690 or AED 695	MASTER'S PROJECT MASTER'S THESIS	3-6
Content Specialty Courses (15-21 credit hours)		
Courses in: Art Education (AED), Fine Arts (FAR), and/or Design (DES)		15-21
General Education Courses (0-6 credit hours)		
Select 0-6 credit hours		0-6

Total Credit Hours 30

All courses are 3 credit hours unless otherwise indicated and should be selected under advisement.

Biology (M.A.)

Master of Arts Program Program Code: MA-AS Major Code: BIO

Biology Department SAMC 166 (716) 878-5203 biology.buffalostate.edu/

The Master of Arts in Biology prepares students for professional employment and advanced degrees in fields ranging from ecology and evolution to biotechnology and health sciences.

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. 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 absence of any of these courses may be regarded as a deficiency and students may be required to complete these recommended courses before graduation.
- 4. A written statement of the applicant's academic background, future plans, and area of research interest.

Applicants interested in completing a thesis must identify a faculty sponsor and request a letter of support from them to accompany the admissions application.

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

Program Requirements

Required Course (3 credit hours)		
BIO 600	FOUNDATIONS OF GRADUATE STUDIES IN BIOLOGY	3
Biology Electives (6	00 level) (15-26 credit hours)	
Select 15-26 credit	hours ¹	15-26
General Graduate Electives (0-6 credit hours)		
Select 0-6 credit hours ¹		0-6
Thesis or Capstone Experience (1-6 credit hours)		
BIO 695	RESEARCH THESIS IN BIOLOGY	1-6
or BIO 699	CAPSTONE EXPERIENCE IN BIOLOGY	
Total Credit Hours		30

¹ Selected by advisement.

Graduation Requirements

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

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.

Students will demonstrate:

- 1. expertise in areas of biology related to course of study or thesis topic
- 2. analytical skills required to interpret and evaluate research literature
- 3. proficiency in professional scientific writing
- 4. proficiency for effective oral communication of biological information
- 5. ability to plan and conduct experimental research (thesis option only)
- 6. apply accepted standards for ethical science (thesis option only)

Business Management (M.S.)

Master of Science Program Program Code: MS-SP Major Code: BSM

Business, Economics, and Public Administration Department Chase Hall 322 (716) 878-4239 business.buffalostate.edu/

Develops and prepares managers to meet the growing needs of business, public sector, and nonprofit organizations. This program provides advanced business education and organizational training to develop the skills needed for successful careers and contributions in the private and public sector.

Admission Requirements

- 1. Completed undergraduate degree from an accredited college or university
- 2. 3.0 out of 4.0 grade point average
- 3. Resume
- 4. Letter of intent including professional objectives and career goals
- 5. Three letters of reference

Applications will be evaluated by members of the Business department in consultation with the personnel of the Graduate Program at SUNY Buffalo State.

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

Required Courses		
BUS 666	INFORMATION SYSTEMS MANAGEMENT	3
BUS 612	ACCOUNTING INFORMATION FOR DECISION MAKING	3
BUS 624	BUSINESS COMMUNICATIONS IN A DIGITAL WORLD	3
BUS 630	MARKETING STRATEGY	3
BUS 640	STRATEGIC HUMAN RESOURCES	3
BUS 660	MANAGERIAL ANALYTICS AND DECISION MAKING	3
BUS 715	MANAGEMENT STRATEGY	3
BUS 690	MASTER'S PROJECT	3

Electives (6 credit hours)		6
Select two from the following:		
BUS 500	MARKETING OF SERVICES	
BUS 519	COMMUNICATION FOR LEADERS AND MANAGERS	
BUS 535	SMALL-BUSINESS OPERATIONS	
BUS 537	ANATOMY OF BANKING	
BUS 688	LEADERSHIP IN ORGANIZATIONS	
BUS 712	MANAGING PROGRAM EVALUATION	
Total Credit Hours		30

Students will be able to:

- 1. Develop and integrate management knowledge into organizational decision-making.
- 2. Develop techniques for effective management of professional behavior and relationships.
- 3. Evaluate data and make sound business decisions accordingly.
- 4. Communicate and present clearly and concisely to a wide audience.
- 5. Identify, evaluate and use emerging technologies to evaluate business opportunities.
- 6. Be an effective project manager, collaborative team member, and strong leader.

Business and Marketing Education (M.S.Ed.)

Master of Science in Education Program Program Code: MSED-ED Major Code: BME

Career, Technical, and Science Education Department Bacon Hall 122 (716) 878-4717 ctse.buffalostate.edu/

Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in</u> all other states

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.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

Completion of the program provides a master of science in education degree and satisfies the requirements for eligibility to apply for professional certification to teach business and marketing in New York State.

Admission Requirements

A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale) Initial Certificate in Business and Marketing.

Program Requirements

Required Professional	Courses (18-21 credit hours)	
BME 600	PRINCIPLES OF BUSINESS AND MARKETING EDUCATION	3
BME 601/CTE 600	RESEARCH SEMINAR	3
BME 602	CURRICULUM DEVELOPMENT AND PLANNING IN BUSINESS AND MARKETING EDUCATION	3
BME 604	IMPROVING INSTRUCTION IN BUSINESS AND MARKETING	3
BME 605/SPF 611	EVALUATION IN BUSINESS AND MARKETING EDUCATION	3
CTE/BME 690	MASTER'S PROJECT	3
Or		
CTE/BME 695	MASTER'S THESIS	
Elective Courses (12-15 credit hours)		
Courses by advisemen	nt that are appropriate in terms of the career goals of the student	12-15
Total Credit Hours		30-33

Career and Technical Education (M.S.Ed.)

Master of Science in Education Program Code: MSED-ED Major Code: CTE

Career, Technical, and Science Education Department Bacon Hall 122 (716) 878-4717 ctse.buffalostate.edu/

Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in</u> all other states

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.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

Advisement

Students are assigned academic advisers to plan programs based on individual needs and degree requirements.

Admission Requirements

A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale). In addition, all applicants should review the <u>Admission to a Graduate Program</u> section in this catalog.

riogram Requiremen		
Required Courses (9 c	credit hours)	
BME 602	CURRICULUM DEVELOPMENT AND PLANNING IN BUSINESS AND MARKETING EDUCATION	3
CTE 600	CONTEMPORARY ISSUES IN OCCUPATIONAL EDUCATION	3
SPF 611/BME 605	EVALUATION IN EDUCATION	3
Elective Courses (12-1	15 credit hours)	
Select four to five from	m the following:	12-15
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 601	SUPERVISION OF VOCATIONAL EDUCATION	
CTE 602	ADMINISTRATION OF VOCATIONAL EDUCATION	
CTE 603	SELECT TOPICS IN THE ORGANIZATION AND ADMINISTRATION/SUPERVISION OF VOCATIONAL EDUCATION	
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 (6-9 credit hours)	
BME 601/SPF 689	RESEARCH SEMINAR	3
CTE 690	MASTER'S PROJECT	3
or CTE 695	MASTER'S THESIS	
Total Credit Hours		30

Childhood and Early Childhood Curriculum and Instruction (M.S.Ed.)

Master of Science in Education Program

Program Code: MSED-ED

Major Code: CUR

Elementary Education, Literacy and Educational Leadership Department

Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Bacon Hall 302, (716) 878-5916

elementaryeducation.buffalostate.edu/

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Teachers with New York State initial teaching certification in childhood and/or early childhood 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 will receive a college recommendation for Professional NYS Childhood and/or Professional Early Childhood Certification.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

Admission Requirements

- 1. A bachelor's degree in early childhood and/or childhood education from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale).
- 2. A well-crafted statement addressing the following:
 - a. Your strengths as a teacher.
 - b. Professional challenge(s) you encountered during your first classroom teaching experiences or field experiences that you hope to address in your graduate work.
 - c. How your graduate program can help you grow as a teacher. If you know which concentration you are selecting, please describe your reasons for selecting it.
 - d. The statement will be evaluated according to the following criteria:
 - i. Organization
 - ii. Conventions of language
 - iii. Content

Note: Please refer to the rubric provided with the application materials for the statement prompts and specific evaluation criteria.

- 3. Professional resume
- 4. Two letters of reference that attest to the applicant's potential as a graduate student. Please note that one references should be from a college professors/instructor.

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

Each applicant will be evaluated in terms of his or her baccalaureate degree, academic performance, letters of recommendation, experiential background, and substance and quality of the personal statement. Please refer to the Graduate Admissions Committee rubric (attached to the supplemental application information) used for evaluating applications.

Required Courses (6 credit hours)		
EDU 501	SEMINAR FOR THE REFLECTIVE TEACHER (to be taken as first course)	3
EDU 620	TEACHING AND LEARNING IN DIVERSE CLASSROOMS	3
Content Courses (12 credit hours)		

Courses can be taken any time in your program after or concurrent with EDU 501		
EDU 513	THEORY, RESEARCH AND PRACTICE IN LITERACY INSTRUCTION	3
EDU 651	THEORY, RESEARCH, AND PRACTICE IN MATHEMATICS INSTRUCTION	3
EDU 654	THEORY RESEARCH AND PRACTICE IN SOCIAL STUDIES INSTRUCTION	3
EDU 671	THEORY, RESEARCH, AND PRACTICE IN SCIENCE INSTRUCTION	3
Required Culm	inating Course (3 credit hours)	
EDU 690	MASTER'S PROJECT	3
Concentration/Electives (9-12 credit hours)		
Can be taken a	ny time in your program after or concurrent with EDU 501	
Select one from the following concentrations or design a 9-credit curriculum concentration by advisement: 9-12		9-12
Literacy		
Early Childhood		
Gifted/Talented		
Educational Technology		
Educational Leadership		
Total Credit Hours		30-33

¹ Prerequisites may be required for some courses. Other courses may be accepted through advisement only. Students who select the Gifted and Talented concentration do not need an elective to obtain the 33 required credits for completion of the program.

Literacy Concentration*

EDU 535	TEACHING WRITING: B-12
EDU 609	RESEARCH AND PRACTICE IN ADOLESCENT LITERACY
EDU 611	EARLY LITERACY INSTRUCTION
EDU 612	DEVELOPING LITERACY THROUGH LITERATURE

^{*}Does not lead to Literacy certification.

Early Childhood Concentration

Appropriate for those without Early Childhood Certification	
EDU 543	CURRICULUM FOR THE YOUNG CHILD
EDU 626	INTEGRATING THE CONTENT AREAS IN THE TEACHING OF YOUNG CHILDREN
EDU 528	FAMILIES AND EARLY CHILDHOOD PROGRAMS
or EDU 611	EARLY LITERACY INSTRUCTION

Gifted/Talented Concentration

If you select this concentration and complete the other NYSED requirements for Gifted and Talented certification, Buffalo State will recommend you for certification.

EDU/CRS 509	INTRODUCTION TO THE GIFTED, TALENTED AND CREATIVE LEARNER
CRS 559	PRINCIPLES IN CREATIVE PROBLEM SOLVING
EDU/CRS 621	CURRICULUM DEVELOPMENT IN GIFTED, TALENTED, AND CREATIVE EDUCATION
EDU 619	COLLABORATION AND PRACTICE IN GIFTED, TALENTED, AND CREATIVE EDUCATION

Educational Technology Concentration

EDU 672	ADVANCED EDUCATIONAL TECHNOLOGY FOR K-6 CLASSROOMS
EDT 500	FUNDAMENTALS OF TECHNOLOGY LITERACY
EDT 601	INSTRUCTIONAL TECHNOLOGIES
EDT 603	INSTRUCTIONAL DESIGN AND PROBLEM SOLVING WITH TECHNOLOGY
EDT 604	AUTHORING FOR EDUCATORS
EDT 614	EDUCATIONAL GRAPHICS AND ANIMATION

Educational Leadership Concentration

EDL 559	PRINCIPLES IN CREATIVE PROBLEM SOLVING
EDL 607	SITE-BASED LEADERSHIP
EDL 683	FACILITATION OF GROUP PROBLEM SOLVING

Childhood Education Initial Teaching Certification (Grades 1-6, M.S.Ed.)

Master of Science in Education Program

Childhood Education Including Initial Teacher Certification (MIITC-Master Including Initial Teacher Certification)

Program Code: MSED-ED

Major Code: CEC

Elementary Education, Literacy and Educational Leadership

Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Bacon Hall 302, (716) 878-5916

elementaryeducation.buffalostate.edu/

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in all other states</u>

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.

To receive initial certification, students must pass the applicable New York State certification exams and fulfill other New York State certification requirements.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

Admission Requirements

- 1. A bachelor's degree from an accredited college or university with an academic major in one of the liberal arts or sciences.
- 2. A minimum cumulative GPA of 3.0 (4.0 scale)
- 3. Meeting with a department advisor to review college transcripts to determine eligibility prior to applying to the program.
- 4. A completed Application Requirement Workshop (included in the online application) 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 (CWP 101 or CWP 102) do not count toward the English requirement.
 - b. Undergraduate major or courses applicable to an acceptable concentration.
 - c. 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 well-crafted statement addressing the following:
 - a. Reasons for wanting to become a childhood teacher and related professional experiences.
 - b. Professional goals

The statement will be evaluated according to the following criteria:

- i. Organization
- ii. Mechanics
- iii. Content
- iv. Relevant professional, teaching, and life experiences
- 6. Three letters of reference that attest to the applicant's potential as a graduate student. Please note that two references from college professors/instructors are preferred.

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

Each applicant will be evaluated in terms of his or her baccalaureate degree, academic performance, letters of recommendation, experiential background, and substance and quality of the personal statement. Please refer to the Graduate Admissions Committee rubric (attached to the supplemental application information) used for evaluating applications.

Program Requirements

Togram Require	··· ····	
Seminar (3 credit	t hours)	
EDU 501	SEMINAR FOR THE REFLECTIVE TEACHER (to be taken early in the program)	3
Multicultural Per	rspectives and Diversity Course (3 credit hours)	
EDU 620	TEACHING AND LEARNING IN DIVERSE CLASSROOMS	3
Foundation Cour	rse (3 credit hours)	
SPF 503	EDUCATIONAL PSYCHOLOGY (Undergraduate equivalent is equal to 0 credit hours.)	0-3
Exceptional Educ	cation Course (3 credit hours)	
EXE 500	INDIVIDUALS WITH SPECIAL NEEDS	3
or EXE 502	MANAGING CLASSROOM ENVIRONMENT AND POSITIVE BEHAVIOR SUPPORTS	

Curriculum (6 credit hours)

EDU 654	THEORY RESEARCH AND PRACTICE IN SOCIAL STUDIES INSTRUCTION	3
EDU 671	THEORY, RESEARCH, AND PRACTICE IN SCIENCE INSTRUCTION	3
Literacy Cours	e (3 credit hours)	
EDU 546	THEORY, RESEARCH, AND PRACTICE IN ENGLISH LANGUAGE ARTS INSTRUCTION (Must be taken prior to EDU 511)	3
Methods and	Practicum Courses (24 credit hours)	
EDU 511	METHODS OF TEACHING ENGLISH LANGUAGE ARTS (Prerequisites apply.)	6
EDU 682	TEACHING MATHEMATICS IN THE ELEMENTARY SCHOOL (Prerequisites apply)	6
EDU 500	PRACTICUM IN EDUCATION	6
EDU 510	PRACTICUM IN CHILDHOOD TEACHING	6
Master's Proje	ect (3 credit hours)	
EDU 690	MASTER'S PROJECT	3
Total Credit H	ours	45-48

Residency

Program Overview

The SUNY Buffalo State graduate residency program provides a residency track option for qualified candidates who are selected by the faculty from their demonstrated competence in the first year of their Master's degree programs. In first year, course sequences are parallel for both non-resident track and resident track candidates to allow faculty and candidates to assess their suitability for the full residency track experience in year two. Rather than the standard 150 hours of field experiences and 100 hours of student teaching located in courses throughout the currently registered programs, residents enjoy 1000 hours of experience in graduated difficulty from field-based co-teaching focused on practicing specific pedagogies to full "teacher of record" responsibilities in the final months of their full year residency experience. The value of this model is in allowing resident applicants to be paid for working full time in schools while they complete their required coursework. The coursework remaining for the residency year complements their work with Mentor teachers and is accomplished in tandem with their classroom experiences.

Admission Requirements

Candidates who wish to pursue the residency option toward a recommendation for certification must be recommended by program faculty either upon first application to the program or during the first year of the curriculum prior to the residency year.

Program	Requi	irements
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Required Courses		
EDU 500	PRACTICUM IN EDUCATION	3-6
EDU 510	PRACTICUM IN CHILDHOOD TEACHING	6
EDU 671	THEORY, RESEARCH, AND PRACTICE IN SCIENCE INSTRUCTION	3
EDU 682	TEACHING MATHEMATICS IN THE ELEMENTARY SCHOOL	6
EDU 690	MASTER'S PROJECT	3

Conflict Analysis and Resolution (M.S.)

Master of Science Program Program Code: MS-AS Major Code: CAR

Conflict Analysis and Resolution Interdisciplinary Unit

Coordinators: Peter Yacobucci Cassety Hall 208 (716) 878-6207 Clairissa Breen Cassety Hall 121 (716) 878-5470

suny.buffalostate.edu/programs/conflict-analysis-and-resolution

The interdisciplinary Master of Science in Conflict Analysis and Resolution (MSCAR) combines theory and application through an applied focus and is designed around conflict resolution pillars/competencies: 1) the theoretical approaches in understanding the why and how conflict exist and escalate, 2) the dynamics of conflict, 3) the practical methods for assessing and evaluating conflict, and 4) the stages of conflict resolution process and storytelling.

Admissions Requirements

- 1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.75 (4.0 scale).
- 2. An official transcript of the applicant's undergraduate program, giving evidence of satisfactory completion of college courses.
- 3. A personal statement detailing interest in the graduate program and an academic writing sample that either displays analytical, computational, or writing excellence or details the views of the applicant on a conflict or a personal experience with a conflict and its resolution.

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

Required Courses (12 credit hours	5)	
EDU 640	CONFLICT RESOLUTION	3
CRS 559	PRINCIPLES IN CREATIVE PROBLEM SOLVING	3
EDL 560	METHODS, THEORIES, AND MODELS OF CREATIVE LEARNING	3
690 PROJECT (CAPSTONE)*		3
Concentration – Select ONE concectoncentration): (9 credit hours)	entration (students must take at least three courses within their	9
Conflict in Education		
ADE 575	FAMILY VIOLENCE AND ADULT EDUCATION	
ADE 655	DIVERSITY ISSUES IN ADULT EDUCATION AND TRAINING	
ADE 660	GRANT WRITING	
CRS 610	FACILITATION OF GROUP PROBLEM SOLVING	
Cooperative Business Practices		

BUS 519 COMMUNICATION FOR LEADERS AND MANAGERS BUS 603 HUMAN RESOURCE MANAGEMENT BUS 640 STRATEGIC HUMAN RESOURCES BUS 688 LEADERSHIP IN ORGANIZATIONS CRS 610 FACILITATION OF GROUP PROBLEM SOLVING Culture, Structures, and International Solutions CRS 610 FACILITATION OF GROUP PROBLEM SOLVING CRJ 602 ORGANIZATIONAL BEHAVIOR AND THE MANAGEMENT PROCESS IN CRIMINAL JUSTICE PSC 605 POLITICS OF THE THIRD WORLD PSC 606 INTERNATIONAL RELATIONS PSC 612 CONTEMPORARY MIDDLE EAST SOC 501 CONTEMPORARY SOCIAL PROBLEMS SOC 506 MINORITY GROUPS IN AMERICAN CULTURE Management-Worker Relations ECO 507 APPLIED MICROECONOMIC THEORY ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9			
BUS 640 STRATEGIC HUMAN RESOURCES BUS 688 LEADERSHIP IN ORGANIZATIONS CRS 610 FACILITATION OF GROUP PROBLEM SOLVING Culture, Structures, and International Solutions CRS 610 FACILITATION OF GROUP PROBLEM SOLVING CRJ 602 ORGANIZATIONAL BEHAVIOR AND THE MANAGEMENT PROCESS IN CRIMINAL JUSTICE PSC 605 POLITICS OF THE THIRD WORLD PSC 606 INTERNATIONAL RELATIONS PSC 612 CONTEMPORARY MIDDLE EAST SOC 501 CONTEMPORARY SOCIAL PROBLEMS SOC 506 MINORITY GROUPS IN AMERICAN CULTURE Management-Worker Relations ECO 507 APPLIED MICROECONOMIC THEORY ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	BUS 519	COMMUNICATION FOR LEADERS AND MANAGERS	
BUS 688 LEADERSHIP IN ORGANIZATIONS CRS 610 FACILITATION OF GROUP PROBLEM SOLVING Culture, Structures, and International Solutions CRS 610 FACILITATION OF GROUP PROBLEM SOLVING CRI 602 ORGANIZATIONAL BEHAVIOR AND THE MANAGEMENT PROCESS IN CRIMINAL JUSTICE PSC 605 POLITICS OF THE THIRD WORLD PSC 606 INTERNATIONAL RELATIONS PSC 612 CONTEMPORARY MIDDLE EAST SOC 501 CONTEMPORARY SOCIAL PROBLEMS SOC 506 MINORITY GROUPS IN AMERICAN CULTURE Management-Worker Relations ECO 507 APPLIED MICROECONOMIC THEORY ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	BUS 603	HUMAN RESOURCE MANAGEMENT	
CRS 610 FACILITATION OF GROUP PROBLEM SOLVING Culture, Structures, and International Solutions CRS 610 FACILITATION OF GROUP PROBLEM SOLVING CRJ 602 ORGANIZATIONAL BEHAVIOR AND THE MANAGEMENT PROCESS IN CRIMINAL JUSTICE PSC 605 POLITICS OF THE THIRD WORLD PSC 606 INTERNATIONAL RELATIONS PSC 612 CONTEMPORARY MIDDLE EAST SOC 501 CONTEMPORARY SOCIAL PROBLEMS SOC 506 MINORITY GROUPS IN AMERICAN CULTURE Management-Worker Relations ECO 507 APPLIED MICROECONOMIC THEORY ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	BUS 640	STRATEGIC HUMAN RESOURCES	
CRS 610 FACILITATION OF GROUP PROBLEM SOLVING CRJ 602 ORGANIZATIONAL BEHAVIOR AND THE MANAGEMENT PROCESS IN CRIMINAL JUSTICE PSC 605 POLITICS OF THE THIRD WORLD PSC 606 INTERNATIONAL RELATIONS PSC 612 CONTEMPORARY MIDDLE EAST SOC 501 CONTEMPORARY SOCIAL PROBLEMS SOC 506 MINORITY GROUPS IN AMERICAN CULTURE Management-Worker Relations ECO 507 APPLIED MICROECONOMIC THEORY ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	BUS 688	LEADERSHIP IN ORGANIZATIONS	
CRS 610 FACILITATION OF GROUP PROBLEM SOLVING CRJ 602 ORGANIZATIONAL BEHAVIOR AND THE MANAGEMENT PROCESS IN CRIMINAL JUSTICE PSC 605 POLITICS OF THE THIRD WORLD PSC 606 INTERNATIONAL RELATIONS PSC 612 CONTEMPORARY MIDDLE EAST SOC 501 CONTEMPORARY SOCIAL PROBLEMS SOC 506 MINORITY GROUPS IN AMERICAN CULTURE Management-Worker Relations ECO 507 APPLIED MICROECONOMIC THEORY ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	CRS 610	FACILITATION OF GROUP PROBLEM SOLVING	
CRJ 602 ORGANIZATIONAL BEHAVIOR AND THE MANAGEMENT PROCESS IN CRIMINAL JUSTICE PSC 605 POLITICS OF THE THIRD WORLD PSC 606 INTERNATIONAL RELATIONS PSC 612 CONTEMPORARY MIDDLE EAST SOC 501 CONTEMPORARY SOCIAL PROBLEMS SOC 506 MINORITY GROUPS IN AMERICAN CULTURE Management-Worker Relations ECO 507 APPLIED MICROECONOMIC THEORY ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	Culture, Structures, and Internatio	nal Solutions	
PROCESS IN CRIMINAL JUSTICE PSC 605 POLITICS OF THE THIRD WORLD PSC 606 INTERNATIONAL RELATIONS PSC 612 CONTEMPORARY MIDDLE EAST SOC 501 CONTEMPORARY SOCIAL PROBLEMS SOC 506 MINORITY GROUPS IN AMERICAN CULTURE Management-Worker Relations ECO 507 APPLIED MICROECONOMIC THEORY ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	CRS 610	FACILITATION OF GROUP PROBLEM SOLVING	
PSC 606 INTERNATIONAL RELATIONS PSC 612 CONTEMPORARY MIDDLE EAST SOC 501 CONTEMPORARY SOCIAL PROBLEMS SOC 506 MINORITY GROUPS IN AMERICAN CULTURE Management-Worker Relations ECO 507 APPLIED MICROECONOMIC THEORY ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	CRJ 602		
PSC 612 CONTEMPORARY MIDDLE EAST SOC 501 CONTEMPORARY SOCIAL PROBLEMS SOC 506 MINORITY GROUPS IN AMERICAN CULTURE Management-Worker Relations ECO 507 APPLIED MICROECONOMIC THEORY ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	PSC 605	POLITICS OF THE THIRD WORLD	
SOC 501 CONTEMPORARY SOCIAL PROBLEMS SOC 506 MINORITY GROUPS IN AMERICAN CULTURE Management-Worker Relations ECO 507 APPLIED MICROECONOMIC THEORY ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	PSC 606	INTERNATIONAL RELATIONS	
SOC 506 MINORITY GROUPS IN AMERICAN CULTURE Management-Worker Relations ECO 507 APPLIED MICROECONOMIC THEORY ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	PSC 612	CONTEMPORARY MIDDLE EAST	
Management-Worker Relations ECO 507 APPLIED MICROECONOMIC THEORY ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	SOC 501	CONTEMPORARY SOCIAL PROBLEMS	
ECO 507 APPLIED MICROECONOMIC THEORY ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	SOC 506	MINORITY GROUPS IN AMERICAN CULTURE	
ECO 524 APPLIED ECONOMETRICS ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	Management-Worker Relations		
ECO 600 LABOR ECONOMICS ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	ECO 507	APPLIED MICROECONOMIC THEORY	
ECO 650 PUBLIC FINANCE Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	ECO 524	APPLIED ECONOMETRICS	
Electives - Select THREE courses Remaining courses to be selected from those within other concentrations or chosen 9	ECO 600	LABOR ECONOMICS	
Remaining courses to be selected from those within other concentrations or chosen 9	ECO 650	PUBLIC FINANCE	
	Electives - Select THREE courses		
		from those within other concentrations or chosen	9

Total Credit Hours

Students will:

- 1. assess differing forms of conflict through an interactive process of engagement
- 2. apply current theoretical knowledge to categorize and assess multiple conflict situations
- 3. determine the most efficient and beneficial response to multiple conflict situations
- 4. formulate appropriate responses to achieve a successful conflict resolution
- 5. establish institutional mechanisms and procedures to prevent future similar conflicts from developing

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Conservation of Art and Cultural Heritage and Conservation Science and Imaging (M.A./M.S.)

Master of Arts Program Program Code: MA-AS Major Code: CAH

Master of Science Program Program Code: MS-AS Major Code: CSV

Patricia H. and Richard E. Garman Art Conservation Department Patrick Ravines, *Director & Professor* Rockwell Hall 230, (716) 878-5025 artconservation.buffalostate.edu/

The Buffalo State University dual M.A./M.S. degree program in Conservation of Art and Cultural Heritage, and Conservation Science and Imaging prepares students for careers as professional conservators caring for works of artistic, historical, and cultural significance. The three-year graduate program is inter- and cross-disciplinary with an educational balance between theory and practice. The instruction provides students with a broad background in conservation treatment, examination and analysis of artwork and cultural heritage, photo-documentation and technical imaging, and the implementation of scientific instrumentation for conservation in their first year. In the second year, students continue taking advanced imaging and science courses and choose their specialization in objects, paintings, or paper conservation (or its subspecialties, book or photograph conservation). The third year is a 12-month internship at a museum, library, archive or other cultural heritage institution under the mentorship of a professional conservator, where students apply the information, knowledge and skills acquired on campus and continue learning in a professional setting.

Educational and career objectives

The M.A./M.S. in Conservation of Art and Cultural Heritage, and Conservation Science and Imaging combines the multi-disciplinary nature of scientific and imaging analysis with that of conservation theory and practice. The degree focuses on conservation treatment practice, decision-making, and ethics; as well as the science (chemistry, physics, and materials science) and imaging (optics, industrial photography, and computational photography) required for the examination, characterization, documentation, long term preservation, and display/storage of cultural materials.

The educational goals and career objectives of the Department are to provide the arts, humanities, and cultural heritage fields with well-educated, highly qualified, and responsible conservators. Graduates are prepared for positions as conservation professionals in museums, galleries, libraries, archives, historical societies, private practices, and regional conservation centers.

Admission Requirements

The Garman Art Conservation Department employs a holistic admissions process to admit the most promising candidates to the dual M.A./M.S. program. We are committed to equity in the admissions process, and our requirements and criteria for assessment are explained below.

- 1.) Undergraduate degree with a GPA of at least 2.8 evidenced by official transcripts from accredited institutions of higher education.
- 2.) Course work in the three areas below. Please note that the required course credits are given in semester credit hours. To calculate quarter hours to semester hour equivalents, multiply by 2/3. For example, 6 quarter hours are equal to 4 semester hours. A grade for each class must appear, except for some qualifying studio art and craft courses (see 2c. below). We may request catalog descriptions or syllabi to determine if a course meets the requirements. For courses taken spring 2020 through spring 2021 pass/fail grades will be accepted. For courses in progress at the time of application, please provide evidence of enrollment with your application.
- 2a.) Art History and Cultural Heritage: 18 Semester Credit Hours (9 credits must be Art History coursework). Course distribution: Qualifying courses require a specific focus on art and artifacts and may include courses within art history, physical anthropology, and archaeology. Examples of courses that <u>do not</u> meet this requirement are history, museum or collections studies, library science, literature or film studies, urban economics, human biology, evolution, languages, administration, internships. Courses in conservation may be listed under conservation experience. This requirement ensures exposure to and understanding of a wide array of artistic, cultural, and historic works, as well as critical thinking, vocabulary, and writing skills.

2b.) Science: 16 Semester Credit Hours

Course distribution: Must include two semesters of introductory/general chemistry with labs and one semester of organic chemistry with lab, or equivalent coursework. A fourth-semester science course with a lab is required and may be one of the following: organic chemistry II, inorganic chemistry, analytical chemistry, instrumental analysis, physical chemistry, material science, mineralogy, or physics. Courses for non-science majors will not be accepted. In-person or hands-on laboratory courses are required unless your education was affected by the pandemic (Spring 2020 through Spring 2021). This requirement ensures applicants have the necessary science background, including familiarity with laboratory skills, equipment and techniques, and the scientific grounding for advanced content in each conservation specialty.

- 2c.) Studio Art and Craft: 12 Semester Credit Hours or equivalent (see below)
- Course distribution: Hands-on courses in a variety of two-dimensional and three-dimensional arts and crafts. Currently, non-credit formal studio art courses taught at museums and community centers can be counted toward this requirement at the rate of approximately 25 hours of studio time for one semester credit. Please submit documentation including institution name, course description, and course duration; no grade submission is required. Note: Courses that do not meet the requirement include computer graphics, digital photography, and short one- and two-day workshops. The intent of this requirement is for the applicant to demonstrate familiarity with a range of materials and techniques, fine hand/motor skills, and manual dexterity.
- 3.) Portfolio of Studio Art and Craft: Please submit a total of 7-10 works in both two and three dimensions. Works submitted do not have to be the result of formal studio courses. Note: Do not submit computer graphics, photography, abstract or expressionist artworks, as they do not demonstrate the manual skills we are evaluating. Include a cover page with the following information for each work: Title, media and support (include all materials and techniques employed), year created context (academic course, independent project, etc.). Indicate how the work shows your proficiency with the materials and/or techniques. Include detailed images where appropriate. This requirement demonstrates the applicant's hand skills and communicates mastery of materials and techniques to the selection committee. A high level of manual proficiency is necessary to learn and perform refined conservation treatments and scientific analyses.
- 4.) Conservation and related experience: Hands-on experience working under the guidance of a professional conservator at a museum, library, archive, regional center, and/or in a private conservation practice is highly recommended. This experience helps develop hand skills, acquire terminology, and allowing applicants to gain familiarity with the field before committing to a graduate program. Preventive conservation, courses in conservation, conference attendance, object handling, and other museum/library/archives tasks are also beneficial experiences. Most candidates accepted into the program demonstrate an awareness of conservation ethics and principles and have basic treatment experience.
- 5.) Curriculum Vitae (C.V.): Please follow the American Institute for Conservation (AIC) Emerging Conservation Professionals Network (ECPN) Guidelines for Resumes and CVs. https://www.conservation-wiki.com/wiki/Resume and Curriculum Vitae
- 6.) Personal Statement: Please provide a 1,000-word statement explaining why you are pursuing art conservation as a career, your strengths, your interest in the graduate-level education provided by the Garman Art Conservation Department, and how such training relates to your goals. Previous applicants should discuss any new skills or experiences since their last application.
- 7.) Letters of Recommendation: Please submit (only) three letters of recommendation. Two letters must be from conservators and/or allied professionals who can indicate your level of experience and likelihood of future success in the field of conservation. One must be from a professor or other academic reference who can speak to your academic ability and likelihood of success in an intensive graduate program. We recognize that some applicants may have difficulty obtaining an academic reference, and in such cases, a reference from a professional or supervisor will be accepted.
- 8.) English Language Requirements: Applicants for whom English is a second language must submit documentation of English language proficiency with a score from the Test of English as a Foreign Language (TOEFL), the International English Language Testing System (IELTS), or the Duolingo English Test as documentation of English language proficiency. Applicants may be considered for admission with a minimum TOEFL score of 550 or higher on the paper exam or 79 on the Internet exam, an IELTS score of 6.0 or higher, or a Duolingo score of 100 or higher. Further information for International Applicants is available here: Graduate Studies.

Applicants should also review the Admission to a Graduate Program section in this catalog.

Application Deadline

All application materials are due no later than January 2 of the year in which admission is sought.

Total Requi	red M.A. Courses (46 credit hours)	
Required M	.A. Courses (41 credit hours)	
Paintings		
CNS 620	TECHNOLOGY AND CONSERVATION OF PAINTINGS I	2
CNS 621	TECHNOLOGY AND CONSERVATION OF PAINTINGS 1 (LAB)	1
CNS 622	TECHNOLOGY AND CONSERVATION OF PAINTINGS II	2
CNS 623	TECHNOLOGY AND CONSERVATION OF PAINTINGS II LABORATORY	1
CNS 625	TECHNOLOGY AND CONSERVATION OF PAINTING III LABORATORY	1
Paper		
CNS 630	TECHNOLOGY & CONSERVATION OF WORKS OF ART ON PAPER I	2
CNS 631	TECHNOLOGY & 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 635	TECHNOLOGY AND CONSERVATION OF WORKS OF ART ON PAPER III LABORATORY	1
Objects		
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 645	TECHNOLOGY AND CONSERVATION OF OBJECTS III LAB	1
Professiona	lism	
CNS 685	SPECIAL TOPICS IN CONSERVATION I	1
CNS 686	SPECIAL TOPICS IN CONSERVATION II	1
CNS 694	MASTER'S PROJECT I	1
CNS 695	MASTER'S PROJECT II	3
CNS 699	INTERNSHIP	12
CNS 698	INTERNSHIP SUSTAINING (Grade recorded as NR-not required.)	0
Electives (5	credit hours, select one pair)	

CNS 624 & CNS 626	TECHNOLOGY AND CONSERVATION OF PAINTINGS III SEMINAR and TECHNOLOGY AND CONSERVATION OF PAINTINGS IV (5)	
CNS 634 & CNS 636	TECHNOLOGY AND CONSERVATION OF WORKS OF ART ON PAPER III SEMINAR and TECHNOLOGY AND CONSERVATION OF WORKS OF ART ON PAPER IV (5)	
CNS 644 & CNS 646	TECHNOLOGY AND CONSERVATION OF OBJECTS III and TECHNOLOGY AND CONSERVATION OF OBJECTS IV (5)	
Total Require	ed M.S. Courses	
Required M.S	5. Courses (31 credit hours)	
Imaging		
CNS 600	CONSERVATION IMAGING: TECHNICAL EXAMINATION AND DOCUMENTATION I	2
CNS 601	CONSERVATION IMAGING: TECHNICAL EXAMINATION AND DOCUMENTATION LAB I	1
CNS 602	CONSERVATION IMAGING: TECHNICAL EXAMINATION AND DOCUMENTATION II	2
CNS 603	CONSERVATION IMAGING: TECHNICAL EXAMINATION AND DOCUMENTATION LAB II	1
CNS 604	CONSERVATION IMAGING: TECHNICAL EXAMINATION AND DOCUMENTATION III	2
CNS 605	CONSERVATION IMAGING: TECHNICAL EXAMINATION AND DOCUMENTATION LAB III	1
CNS 606	CONSERVATION IMAGING: TECHNICAL EXAMINATION AND DOCUMENTATION IV	2
CNS 607	CONSERVATION IMAGING: TECHNICAL EXAMINATION AND DOCUMENTATION LAB IV	1
Conservation	Science (CS)	
CNS 610	POLYMERS IN ART & CONSERVATION	3
CNS 611	POLYMERS IN ART & CONSERVATION (LAB)	1
CNS 612	CONSERVATION SCIENCE: POLARIZED LIGHT MICROSCOPY, LIGHT & MATTER	2
CNS 613	CONSERVATION SCIENCE: POLARIZED LIGHT MICROSCOPY, LIGHT & MATTER LABORATORY	1
CNS 614	CONSERVATION SCIENCE: INORGANIC MATERIALS IN ART AND CONSERVATION	3
CNS 615	CONSERVATION SCIENCE: INORGANIC MATERIALS IN ART & CONSERVATION LABORATORY	1
CNS 616	TECHNICAL ASPECTS OF PREVENTATIVE CONSERVATION	3
CNS 617	TECHNICAL ASPECTS OF PREVENTATIVE CONSERVATION (LAB)	1
Professionali	sm	
CNS 685	SPECIAL TOPICS IN CONSERVATION I ¹	1
CNS 686	SPECIAL TOPICS IN CONSERVATION II ¹ (1)	

¹ CNS 685 and CNS 686 are taken twice for 1 credit hour each for a total of 4 credit hours that are applied to both the M.A. degree and the M.S. degree.

Student Learning Outcomes

- 1. Historical Perspective & Cultural Context: Have a judicious understanding of the inextricable relevance of history, art history, cultural context with the contemporary perspectives of the object's medium/media, aesthetic value, production methods and place of origin, and its relationship to the object's 'life time journey', including previous conservation and restoration treatments and current condition.
- 2. Critical thinking & Problem Solving: To have the competency of integrating and synthesizing data and information from a multitude of sources of an historic or artistic work or collection of cultural objects to creatively plan sound conservation and restoration approaches. To adapt to work situations and conditions, and to innovate when necessary to successfully plan and execute conservation and restoration treatments.
- 3. Imaging, Technical Examination & Documentation: To master the techniques, instruments and equipment to examine and document the condition, characteristics, and method of manufacture of the historic and artistic works and cultural objects to be conserved and restored. To then be able to critically analyze the image data and derive useful information for use in diagnosis and in the development of sound conservation treatment options and preventive measures.
- 4. Scientific Analysis: To master scientific instrumentation to examine and analyze aspects of condition and method of manufacture of historic and artistic works and cultural objects to be conserved and restored. To critically analyze scientific/technical data and derive useful information for use in the development of sound conservation treatment options.
- 5. Craftsmanship & Hand skills: Demonstrate a high level of competence in the skills requiring eye-hand coordination and manual dexterity for detailed work and finish using a wide range of tools, techniques, and processes to conserve and restore historic and artistic works and cultural objects from beginning to end.
- 6. Professional Conduct & Ethical Behavior: Understanding the *Code of Ethics and Guidelines for Practice* of the American Institute for Conservation of Historic and Artistic Works; functional knowledge and practical information on public relations; portfolio development for internships and future jobs; how to interview; and contribution to the profession's body of information through publication and presentations of case studies and/or research.

Creativity and Change Leadership (M.S.)

Master of Science Program Program Code: MS-EP Major Code: CRL

Creativity and Change Leadership Department Chase Hall 248, (716) 878-6223 creativity.buffalostate.edu/

The Creativity and Change Leadership Department, and its Center for Applied Imagination, credentials 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 Creativity and Change Leadership, as well as graduate certificate in creativity and change leadership (see next program). These unique graduate programs attract students from business, education, and many diverse fields. Both the master of science and advanced graduate certificate are available through on campus courses, for those who reside in Western New York, and fully online (i.e., all courses offered in online synchronous format) for those around the world. The distance program has been delivered to busy professionals for more than 20 years and has attracted students from across the United States and from such countries as Australia, China, Colombia, South Africa, Brazil, Canada, Italy, England, Pakistan, Denmark, The Netherlands, and Singapore.

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, data analysis and storytelling, conflict resolution, etc.). The creativity and change leadership program challenges students to develop their creative talents and to become leaders of change in their professional lives. Visit the Creativity and Change Leadership website (creativity.buffalostate.edu/) for more information.

- 1. 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.
- 2. A written statement of the applicant's professional or educational goals and how a degree in creativity studies supports these goals. The recommended length for the letter of intent is two to three pages.
- 3. Brief biographical sketch, one to two paragraphs, that provides a summary of the applicant's accomplishments, areas of expertise, and experiences.
- 4. Two academic/professional letters of reference.
- 5. 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.

Program Requirements

Required Courses	(21 credit hours)	
CRS 559	PRINCIPLES IN CREATIVE PROBLEM SOLVING	3
CRS 560	FOUNDATIONS OF CREATIVE LEARNING	3
CRS 610	FACILITATION OF GROUP PROBLEM SOLVING	3
CRS 620	CREATIVITY ASSESSMENT: METHODS AND RESOURCES	3
CRS 625	CURRENT ISSUES IN CREATIVE STUDIES	3
CRS 635	CREATIVITY AND CHANGE LEADERSHIP	3
CRS 670	FOUNDATIONS IN TEACHING AND TRAINING CREATIVITY	3
Elective Courses (6-12 credit hours)	
Select 6-12 credit	hours	6-12
Master's Project,	Master's Thesis, or Comprehensive Exam (0-6 credit hours)	
Select one from the	he following:	0-6
Comprehensive E	xam	
CRS 690	MASTER'S PROJECT (3-6)	
CRS 795	MASTER'S THESIS (3-6)	
Total Credit Hours	S	33

Students will be able to:

- 1. Articulate the interrelated aspects among key definitions, principles and constructs in the discipline of creativity in a way that demonstrates mastery of both historical and contemporary creativity literature and resources.
- 2. Develop an informed philosophy of one's own view of creativity.
- 3. Describe a vivid image of themselves as future creative leaders in their personal and professional lives.
- 4. Distinguish good science from poor science in the field of creativity studies, for example students can distinguish among opinions, theories, empirically established fact and rigorous research studies.

- 5. Synthesize literature in a manner that demonstrates that they can identify, comprehend, analyze and evaluate knowledge germane to their topic of interest.
- 6. Engage in problem finding that leads to the identification of a gap that is then addressed by the student in a novel way.
- 7. Develop a knowledge base in Creative Problem Solving (CPS).
- 8. Develop and demonstrate their CPS facilitation skills and fundamental group process skills through applied experiences in leading small groups through the CPS process.
- 9. Understand and apply the skills needed to facilitate, teach or lead with the CPS process in professional settings.

Criminal Justice (M.S.)

Master of Science Program Program Code: MS-SP Major Code: CRJ

Criminal Justice Department
Cassety Hall Room 102
(716) 878-4517
criminaljustice.buffalostate.edu/

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 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 or a Master's degree from an accredited college or university.
- 2. A written statement of intent that includes the applicant's preparation for graduate study.

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 minimum of five years of full-time work experience in the criminal justice field.

Applications are reviewed on a continual basis for the fall and spring semesters.

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

Required Core Courses (18 credit hours)			
CRJ 501	THEORETICAL PERSPECTIVES ON CRIME AND CRIMINAL JUSTICE	3	
CRJ 504	RESEARCH METHODS IN CRIMINAL JUSTICE	3	
CRJ 601	CORRECTIONAL STRATEGIES	3	
CRJ 604	CRIMINAL COURTS	3	
CRJ 606	LAW ENFORCEMENT ISSUES	3	
CRJ 609	STATISTICS IN CRIMINAL JUSTICE	3	
Elective Cou	Elective Courses (9-18 credit hours)		

CRJ 508	HISTORY OF CRIMINAL JUSTICE	
		<u>.</u>
CRJ 511	ADVANCED CRIME ANALYSIS	
CRJ 590	INDEPENDENT STUDY (1-3)	
CIG 590		
CRJ 602	ORGANIZATIONAL BEHAVIOR AND THE MANAGEMENT PROCESS IN CRIMINAL JUSTICE	
CRJ 603	A DAMANICED ATION OF ILLICTICS	
CKJ 603	ADMINISTRATION OF JUSTICE	
CRJ 608	SPECIAL TOPICS IN CRIMINAL JUSTICE	
CRJ 611	DATA-DRIVEN POLICING	
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 630	CONSTITUTIONAL ISSUES IN CRIMINAL JUSTICE	
CRJ 635	CRIMINAL JUSTICE ETHICS	
CI 13 033	CHIVITYAL JOSTICE LITTICS	
CRJ 710	RESEARCH PROJECT	
Lin to O anodi		
academic adv	it hours of electives may be taken outside the department with prior written approval of the student's viser.	
Comprehens	ive Examination or Master's Project (0-3 credit hours)	
Select one or	otion:	0-3
Select one of	-	0-3
CRJ 690	MASTER'S PROJECT	
	ive Examination	

Total Credit Hours Students will be able to:

1. Demonstrate a basic knowledge of methods of gathering evidence in criminal justice and an understanding of what constitutes acceptable and appropriate evidence.

36

- 2. Demonstrate knowledge of the impacts and outcomes of various criminal justice policies and practices.
- 3. Demonstrate the ability to articulate, apply and critically evaluate criminal justice theories.
- 4. Demonstrate competence in writing discipline specific research-based papers incorporating supporting material.
- 5. Demonstrate the ability to think critically.

Criminal Justice Combined Pathway (B.S. and M.S.)

Bachelor of Science Program Program Code: BS-EP Major Code: CRJ

Master of Science Program Program Code: MS-SP Major Code: CRJ

Criminal Justice Department Cassety Hall Room 102 (716) 878-4517 criminaljustice.buffalostate.edu/

Enrollment in a combined pathway allows highly qualified, current SUNY Buffalo State students to work on the Master of Science in Criminal Justice while completing the bachelor's degree. Up to 12 credits of designated master's courses are incorporated into the bachelor's degree program and will count toward both the bachelor's degree and the master's degree.

Program Requirements

The combined pathway requires 144 credits total, of which 36 are master's credits leading to the MS in Criminal Justice. Students must meet all college, department and relevant concentration guidelines.

The program requires careful planning that should begin by the second year of the student's undergraduate career at SUNY Buffalo State. The student and the primary advisor (or department chair) should consult in planning the undergraduate degree program so that these requirements are met during undergraduate study and that the 12 credits of master's courses from the MS Program in Criminal Justice are included in the degree plan. Students must meet graduate expectations for academic progress and grade point average in their master's level courses to remain in the combined pathway.

Admission Requirements

Admission into the combined pathway is highly selective. Matriculated undergraduate students may apply to the BS/MS pathway in their third year (junior year) and will complete all of the application requirements for the program. The admission application process includes a minimum GPA of 3.2, completion of 89 credit hours, of which 30 credits must include criminal justice core and prerequisite requirements (see below), and a letter of recommendation.

Program Requirements B.S. in Criminal Justice					
General Education 23 Requirements					
33 credit hours					
Criminal Justice Major Requirements (42 credit hours)					
Core Courses (18 credit hours)					
CRJ 101	INTRODUCTION TO CRIMINAL JUSTICE	3			
CRJ 201	CRIMINAL LAW	3			
CRJ 202	THE POLICE PROCESS	3			
CRJ 204	THE CORRECTIONAL PROCESS	3			
CRJ 303	CRIMINAL JUSTICE THEORY AND IDEOLOGY	3			
CRJ 315	RESEARCH METHODS IN CRIMINAL JUSTICE	3			
Statistics Core Requirements (3 credit hours) 3					
Select one course from the following:					
CRJ 310	STATISTICS IN CRIMINAL JUSTICE				
ECO 305	STATISTICS FOR ECONOMICS				

MAT 311	INTRODUCTORY PROBABILITY AND STATISTICS			
PSY 350	STATISTICS IN PSYCHOLOGICAL RESEARCH			
SOC 299	SOCIAL STATISTICS			
Senior Seminar and Diversity Requirement (3 credit hours)		3		
Select one course from the following:				
CRJ 425	RACE, ETHNICITY, AND THE ADMINISTRATION OF JUSTICE			
CRJ 430	GENDER AND THE ADMINISTRATION OF JUSTICE			
Undergraduate Major Electives				
Supporting Courses (6 credit	hours)	6		
Select two courses from the following:				
CRJ 250	INTRODUCTION TO INTELLIGENCE ANALYSIS			
CRJ 301	POLICE ORGANIZATION AND MANAGEMENT			
CRJ 302	CRIMINAL JUSTICE AND THE COMMUNITY			
CRJ 305	THE JUVENILE JUSTICE SYSTEM			
CRJ 306	PROBATION, PAROLE, AND COMMUNITY CORRECTIONS			
CRJ 307	COMPARATIVE CRIMINAL JUSTICE SYSTEM			
CRJ 308	CRIME PREVENTION			
CRJ 317	CONSTITUTIONAL ISSUES IN CRIMINAL JUSTICE			
CRJ 320	CRIMINAL COURTS			
CRJ 355	CRIME ANALYSIS			
Advanced Electives (6 credit	hours for Intelligence Analysis, Policing, Corrections Concentrations)	6		
Select two courses from the following:				
CRJ 406	CORRECTIONAL INSTITUTIONS AND PROGRAMS			
CRJ 409	ADVANCED ISSUES IN LAW ENFORCEMENT			
CRJ 420	ADVANCED ISSUES IN PUNISHMENT AND CORRECTIONS			
CRJ 440	DRUGS, CRIME, AND DRUG POLICY			
CRJ 450	TERRORISM AND CRIMINAL JUSTICE			
CRJ 455	ADVANCED INTELLIGENCE ANALYSIS			

Required Graduate Major Courses (12 credit hours)		
CRJ 501	THEORETICAL PERSPECTIVES ON CRIME AND CRIMINAL JUSTICE *	3
CRJ 504	RESEARCH METHODS IN CRIMINAL JUSTICE *	3
CRJ 601	CORRECTIONAL STRATEGIES *	3
CRJ 606	LAW ENFORCEMENT ISSUES *	3
*courses used in B.S. and M.S. simultaneously		

Total Credit Hours: 120

Program Requirements M.S. in Criminal Justice

Required Graduate M	ajor Courses	
Core Courses (18 cred	lit hours)	
All six required		
CRJ 501	THEORETICAL PERSPECTIVES ON CRIME AND CRIMINAL JUSTICE *	3
CRJ 504	RESEARCH METHODS IN CRIMINAL JUSTICE *	3
CRJ 601	CORRECTIONAL STRATEGIES *	3
CRJ 604	CRIMINAL COURTS *	3
CRJ 606	LAW ENFORCEMENT ISSUES *	3
CRJ 609	STATISTICS IN CRIMINAL JUSTICE *	3
*courses used in B.S.	and M.S. simultaneously	
Graduate Major Electi	ives (15-18 credit hours)	15-18
	ives (13-18 cledit flodis)	13 10
CRJ 508	HISTORY OF CRIMINAL JUSTICE	13 10
		13 10
CRJ 508	HISTORY OF CRIMINAL JUSTICE	13 10
CRJ 508 CRJ 511	HISTORY OF CRIMINAL JUSTICE ADVANCED CRIME ANALYSIS	13 10
CRJ 508 CRJ 511 CRJ 590	HISTORY OF CRIMINAL JUSTICE ADVANCED CRIME ANALYSIS INDEPENDENT STUDY (1-3) ORGANIZATIONAL BEHAVIOR AND THE MANAGEMENT PROCESS IN CRIMINAL	
CRJ 508 CRJ 511 CRJ 590 CRJ 602	HISTORY OF CRIMINAL JUSTICE ADVANCED CRIME ANALYSIS INDEPENDENT STUDY (1-3) ORGANIZATIONAL BEHAVIOR AND THE MANAGEMENT PROCESS IN CRIMINAL JUSTICE	
CRJ 508 CRJ 511 CRJ 590 CRJ 602 CRJ 603	HISTORY OF CRIMINAL JUSTICE ADVANCED CRIME ANALYSIS INDEPENDENT STUDY (1-3) ORGANIZATIONAL BEHAVIOR AND THE MANAGEMENT PROCESS IN CRIMINAL JUSTICE ADMINISTRATION OF JUSTICE	
CRJ 508 CRJ 511 CRJ 590 CRJ 602 CRJ 603 CRJ 608	HISTORY OF CRIMINAL JUSTICE ADVANCED CRIME ANALYSIS INDEPENDENT STUDY (1-3) ORGANIZATIONAL BEHAVIOR AND THE MANAGEMENT PROCESS IN CRIMINAL JUSTICE ADMINISTRATION OF JUSTICE SPECIAL TOPICS IN CRIMINAL JUSTICE	
CRJ 508 CRJ 511 CRJ 590 CRJ 602 CRJ 603 CRJ 608 CRJ 611	HISTORY OF CRIMINAL JUSTICE ADVANCED CRIME ANALYSIS INDEPENDENT STUDY (1-3) ORGANIZATIONAL BEHAVIOR AND THE MANAGEMENT PROCESS IN CRIMINAL JUSTICE ADMINISTRATION OF JUSTICE SPECIAL TOPICS IN CRIMINAL JUSTICE DATA-DRIVEN POLICING	

CRJ 624	COMPUTER APPLICATION	
CRJ 625	RACE AND ETHNICITY IN CRIMINAL JUSTICE	
CRJ 626	GENDER ISSUES IN CRIMINAL JUSTICE	
CRJ 630	CONSTITUTIONAL ISSUES IN CRIMINAL JUSTICE	
CRJ 635	CRIMINAL JUSTICE ETHICS	
CRJ 710	RESEARCH PROJECT	
Mandatory Exit Requireme	ent (0-3 credit hours)	0-3
Select one from the following:		
Comprehensive Exam		0
CRJ 690	MASTER'S PROJECT	3

Total Credit Hours: 36

Data Science and Analytics (M.S.)

Master of Science Program Program Code: MS-AS Major Code: DSA

Mathematics Department Joaquin Carbonara, Coordinator Science and Math Complex 379 (716) 878-6423 dataanalytics.buffalostate.edu/

The M.S. in Data Science and Analytics offers advanced practical training for in-demand modern skills to manipulate, organize and present data essential for informed, evidence-based decision-making and planning across industries. This program is open to students with basic programming and statistical skills from all undergraduate majors. Courses cover highly marketable techniques using data analytics tools, computer coding, machine learning, geospatial programming, data design, visualization, and analysis. Students will develop professional skills in project management, communications, data governance, and creative problem-solving for effective collaboration. Unique components of the program include workshops with local experts and an applied-skills internship with industry partners.

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 two- to three-page statement of intent (essay) that includes the following:
 - educational and professional objectives; and
 - an explanation of the reasons for interest in data science and analytics
- 3. An interview with the program coordinator or a DSA faculty member. The student will be contacted for an appointment after the completed application is received.

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

Program Requirements

Required Courses (18 credit hours)

CIS 512 INTRODUCTION TO DATA SCIENCE AND ANALYTICS 3

CIS 600	MACHINE LEARNING FOR DATA SCIENCE	3
DSA 688	EXPERIENTIAL LEARNING IN DATA SCIENCE AND ANALYTICS	3
MAT 616	ELEMENTS OF MATHEMATICS, PROGRAMMING AND COMPUTER SCIENCE FOR DATA SCIENCE	3
One of the following "p	olus" courses (3 credit hours)	3
PSM 601	PROJECT MANAGEMENT FOR MATH AND SCIENCE PROFESSIONALS	
PSM 602	COMMUNICATION STRATEGIES FOR MATH AND SCIENCE PROFESSIONALS	
DSA 650	DATA STRATEGY AND GOVERNANCE	
One of the following st	atistics courses (3 credit hours)	3
MAT 646	INTRODUCTION TO STATISTICS FOR DATA SCIENCE	
BIO 670	BIOLOGICAL DATA ANALYSIS	
Elective Courses (12 cre	edit hours)	12
Choose four courses by	advisement from the following (each course is 3 credit hours)	
BUS 519	COMMUNICATION FOR LEADERS AND MANAGERS	
COM 547	DATA ANALYTICS FOR STRATEGIC COMMUNICATION	
DSA 501	DATA ORIENTED COMPUTING AND ANALYTICS	
DSA 601	MACHINE LEARNING MODELS IN PYTHON	
DSA 610	DATABASES AND THE DATA SCIENCE INFORMATION LIFE CYCLE	
DSA 621	DATA SCIENCE TOOLS IN ENERGY ENGINEERING	
DSA 652	APPLIED TIME SERIES ANALYSIS IN BANKING RISK MANAGEMENT (1)	
ENT 581	RENEWABLE DISTRIBUTED GENERATIONAND STORAGE	
ENT 582	SMART GRID FROM SYSTEMS PERSPECTIVE	
ENT 622	MACHINE LEARNING FOR MATERIALS SCIENCE IN CLEAN ENERGY	
GEG 584	GEOSPATIAL PROGRAMMING	
GEG 585	INTERACTIVE AND WEB-BASED MAPPING	
HEA 730	DATA VISUALIZATION AND STORYTELLING	
PSM 601	PROJECT MANAGEMENT FOR MATH AND SCIENCE PROFESSIONALS (This course cannot count for both a "plus" and elective)	

PSM 602	COMMUNICATION STRATEGIES FOR MATH AND SCIENCE PROFESSIONALS (This course cannot count for both a "plus" and elective)	
SPF 689	METHODS AND TECHNIQUES OF EDUCATIONAL RESEARCH	
Or additional elec	ctive courses by advisement	
Total Credit Hour	·s	30

Students will:

- 1. select and apply an appropriate statistical, mathematical or computational model for a given quandary
- 2. acquire data from data scraping and open sources and understand the ethical and legal ramifications of data acquisition
- 3. store, clean, organize, and manipulate real world data from multiple sources
- 4. compose and present an effective oral, written report or dynamic dashboard, to a lay audience (including storytelling and data visualization) that enhances the audience's understanding and reveals properties of the data
- 5. use the appropriate software or programming application (Python, SQL, SAS, SPSS, Excel) to manage and analyze data
- 6. perform effectively as a member of a team to execute a project and will understand what contributes to team success
- 7. integrate context specific information into their data manipulation allowing them the flexibility to interpret data from many different environments

Dietetics (M.S.)

Master of Science Program Program Code: MS-SP Major Code: DIE

Health, Nutrition and Dietetics Department Caudell Hall 334 (716) 878-5913 hnd.buffalostate.edu/

The Master's of Science in Dietetics offers registered dietitian nutritionists (RDN) high demand courses to prepare for future practice. The MS, Dietetics also completes the didactic and supervised experiential learning requirements with the undergraduate B.S., Dietetics (formerly Dietitian Education Program) for the Registered Dietitian Nutrition credential within the Dietetics Combined Pathway (BS and MS). and The Dietetics Combined Pathway (BS and MS) has been accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) as Future Education Model (FEM) graduate program (Future Education Model Standards and Templates (eatrightpro.org)). FEM accreditation standards integrate didactic coursework with supervised experiential learning in a competency-based curriculum designed to prepare nutrition and dietetics practitioners for future practice. Effective January 1, 2024, the Commission on Dietetic Registration (CDR) will requires a minimum of a master's degree to be eligible to take the credentialing exam to become a registered dietitian nutritionist (RDN).

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. Completion of the on-campus undergraduate Buffalo State B.S., Dietetics or Registered Dietitian Nutritionist credential (copy of CDR card)
- 3. A written statement describing the applicant's interest and experience in the field. The recommended length for the letter of intent is two to three pages.
- 4. Official transcript
- 5. Resume
- 6. Interview

Program Requirements

Required Courses

NFS 571

NFS 601	LEADERSHIP AND PROJECT MANAGEMENT IN DIETETICS	3
NFS 605	CURRENT TRENDS IN NUTRITION	3
HEW 605	EPIDEMIOLOGY	3
NFS 607	EXPERIENTIAL LEARNING IN WEIGHT MANAGEMENT AND DIABETES PREVENTION AND TREATMENT	3
NFS 609	EXPERIENTIAL LEARNING IN ADVANCED MEDICAL NUTRITION THERAPY	3
NFS 612	NUTRITION COUNSELING	3
NFS 689	METHODS OF NUTRITIONAL RESEARCH	3
NFS 690	MASTER'S PROJECT	3
Electives		3
Total Credit	: Hours	30

Dietetics Combined Pathway (B.S. and M.S.)

Bachelor of Science Program Program Code: BS-EP

Major Code: DIE

Master of Science Program Program Code: MS-SP Major Code: DIE

Health, Nutrition and Dietetics Department Caudell Hall 334 (716) 878-5913 hnd.buffalostate.edu/

Enrollment in a combined pathway allows highly qualified, current SUNY Buffalo State University students to work on the Master of Science in Dietetics while completing the bachelor's degree. Up to 12 Twelve credits of designated master's courses are incorporated into the bachelor's degree program and will count toward both the bachelor's degree and the master's degree. The undergraduate B.S. portion of the pathway is in-person. The M.S., Dietetics is online.

The Dietetics Combined Pathway has been accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) as Future Education Model (FEM) graduate program (Future Education Model Standards and Templates). FEM accreditation standards integrate didactic coursework with supervised experiential learning in a competency-based curriculum designed to prepare nutrition and dietetics practitioners for future practice. Effective January 1, 2024, the Commission on Dietetic Registration (CDR) will requires a minimum of a master's degree to be eligible to take the credentialing exam to become a registered dietitian nutritionist (RDN).

Admission Requirements

Admission into the combined pathway is highly selective. Matriculated undergraduate students may apply to the B.S. and M.S. pathway in their second year for a junior year start and will complete all of the application requirements for the program. The admission application process includes a minimum GPA of 2.75, completion of prerequisite courses (transfer student may transfer many of these courses) specified for the BS, Dietetics two letters of recommendation, two faculty interviews, and personal statement. To advance to the master's portion of the pathway, a GPA 3.0 is required.

Prerequisite courses include: BIO 100 Principles of Biology BIO 308 Human Anatomy and Physiology I BIO 309 Human Anatomy and Physiology Lab

CHE 111/113 Fundamentals of Chemistry I and Laboratory I

CHE 112/114 Fundamentals of Chemistry II and Laboratory II

CHE 201/203 Organic Chemistry I and Laboratory I

CHE 322 Biological Chemistry

NFS 100 Introduction to Food Preparation NFS 102 Introductory Nutrition

NFS 200 Applied Food Chemistry

NFS 211 Applied Management in Dietetics I

NFS 230 Introduction to Dietetics

NFS 302 Advanced Nutrition

NFS 315 Life Cycle and Community Nutrition I

PSY 101 Introduction to Psychology

Program Requirements

The combined pathway requires 144 140 credits total, of which 30 are master's credits leading to the M.S. in Dietetics. Students who complete the pathway become eligible to sit for the RDN credentialing exam: as the pathway includes 1000 hours of experiential learning and ACEND required competencies.

The program requires careful planning that should begin in the first year of the student's undergraduate career at SUNY Buffalo State University. The student their primary advisor should consult their major advisor each semester in planning the undergraduate degree program so that these degree requirements are met during undergraduate study. and that up to 12 credits of master's courses from the M.S. Program in Dietetics are included in the degree plan. Students must meet graduate expectations for academic progress and grade point average in their master's level courses to remain in the combined pathway.

Dietetics, B.S.

General Education Requirements		21
Required Undergraduate courses for the major		
NFS 100	INTRODUCTION TO FOOD PREPARATION	3
NFS 102	INTRODUCTORY NUTRITION	3
NFS 200	APPLIED FOOD CHEMISTRY	1
NFS 211	APPLIED MANAGEMENT IN DIETETICS I	3
NFS 230	INTRODUCTION TO DIETETICS	2
NFS 302	ADVANCED NUTRITION	3
NFS 311	APPLIED MANAGEMENT IN DIETETICS II	3
NFS 315	LIFE CYCLE AND COMMUNITY NUTRITION I	3
NFS 316	LIFE CYCLE AND COMMUNITY NUTRITION II	3
NFS 330	INTEGRATIVE AND FUNCTIONAL NUTRITION	1
NFS 401	MEDICAL NUTRITIONAL THERAPY I	4
NFS 402	MEDICAL NUTRITIONAL THERAPY II	3
NFS 403	MEDICAL NUTRITIONAL THERAPY III	3
NFS 405	PRINCIPLES OF NUTRITION EDUCATION	2

NFS 430	INTRODUCTION TO NUTRITION RESEARCH	3
NFS 445	NUTRITION CARE A	3
NFS 446	NUTRITION CARE B	3
NFS 447	NUTRITION CARE C	4
NFS 448	NUTRITION CARE D	4
NFS 449	NUTRITION CARE E	3
Required courses ou	utside the major (32 credit hours)	
BIO 100	PRINCIPLES OF BIOLOGY	3
BIO 308	SURVEY OF HUMAN ANATOMY AND PHYSIOLOGY	3
BIO 309	LABORATORY SURVEY OF HUMAN ANATOMY AND PHYSIOLOGY	1
BIO 355	SURVEY OF MICROBIOLOGY	3
CHE 111 & CHE 113	FUNDAMENTALS OF CHEMISTRY I and LABORATORY FOR FUNDAMENTALS OF CHEMISTRY I	4
CHE 112 & CHE 114	FUNDAMENTALS OF CHEMISTRY II and LABORATORY FOR FUNDAMENTALS OF CHEMISTRY II	4
CHE 201 & CHE 203	ORGANIC CHEMISTRY I and ORGANIC CHEMISTRY LABORATORY I	4
CHE 322	BIOLOGICAL CHEMISTRY	4
MAT 311	INTRODUCTORY PROBABILITY AND STATISTICS (or equivalent)	3
PSY 101	INTRODUCTION TO PSYCHOLOGY	3
Required Graduate	courses (12 credit hours)	
NFS 601	LEADERSHIP AND PROJECT MANAGEMENT IN DIETETICS	3
*NFS 571	EXPERIENTIAL LEARNING IN FOOD SERVICE SYSTEMS IN HEALTH CARE	3
*NFS 605	CURRENT TRENDS IN NUTRITION *	3
*NFS 689	METHODS OF NUTRITIONAL RESEARCH *	3
*HEW 605	EPIDEMIOLOGY *	3
Dietetics, M.S.		122
Required Graduate	major courses	
NFS 550	GRADUATE PRACTICUM IN DIETETICS	3

*NFS 571	EXPERIENTIAL LEARNING IN FOOD SERVICE SYSTEMS IN HEALTH CARE	3
*NFS 601	LEADERSHIP AND PROJECT MANAGEMENT IN DIETETICS	3
*NFS 605	CURRENT TRENDS IN NUTRITION *	3
*HEW 605	EPIDEMIOLOGY *	3
NFS 607	EXPERIENTIAL LEARNING IN WEIGHT MANAGEMENT AND DIABETES PREVENTION AND TREATMENT	3
NFS 609	EXPERIENTIAL LEARNING IN ADVANCED MEDICAL NUTRITION THERAPY	3
NFS 612	NUTRITION COUNSELING	3
*NFS 689	METHODS OF NUTRITIONAL RESEARCH *	3
NFS 690	MASTER'S PROJECT	3
Total Graduate Cred	dit Hours	30

English (M.A.)

Master of Arts Program Program Code: MA-AS Major Code: ENG

English Department Ketchum Hall 213 (716) 878-5416 english.buffalostate.edu/

The Master of Arts 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 builds upon students' undergraduate work in English by offering the opportunity to study several different areas of concentration in depth. It serves as an excellent preparatory program for doctoral-level study in English as well as for careers that require skills such as close reading, textual analysis, critical thinking, and effective written communication.

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, at least 27 of which must be in English literature, exclusive of basic college writing.
- 3. Students must demonstrate competency in written English by submitting a writing sample of their best academic work. Students for whom English is an alternate language are required to submit evidence of passing TOEFL scores, as required by the SUNY system for international students.

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

Required Courses (18 credit hours) ¹		
ENG 601	RESEARCH IN LITERATURE AND LANGUAGE	3
Select one from the follo	lowing:	3
ENG 644	IDEOLOGY AND LITERATURE	

ENG 645	LITERATURE AND SOCIAL JUSTICE	
ENG 652	LITERARY CRITICISM	
At least 3 credit hours in Britis	sh Literature	3
At least 3 credit hours in Ame	rican Literature	3
At least 3 credit hours in non-	American, non-British literature	3
At least 3 credit hours in lingu	uistics or genre study (ENG 639 or ENG 670)	3
Comprehensive Examination	(0 credit hours)	
Comprehensive examination credit hours.	required for all students, 0 credit hours, to be taken after the completion of at least 24	0
Elective Courses (12 credit ho	urs) ¹	
Master's Project, but if they c	areas, selected under advisement. Students are not required to produce a Master's Thesis or hoose either option, they must apply for permission from the department the term prior to ork and be approved to undertake these options.	12
Total Credit Hours		30

¹ Selected under advisement.

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. This requirement may be fulfilled by submitting high school transcripts reflecting two years of a foreign language with a grade of B or higher, or by submitting college transcripts reflecting two semesters of a foreign language with a grade of B or higher.

Upon completion of the English Literature M.A. degree, students will:

- 1. Demonstrate an in-depth knowledge of the periods, genres, and major writers of British and American literature, and an awareness of the various critiques and revisions of this literature's canon.
- 2. Demonstrate familiarity with major movements or writers of literatures in English outside British and American literature, and be able to place that literature within worldwide cultural and literary trends.
- 3. Describe and explain how the literature is affected by cultural and historical forces.
- 4. Analyze how ideas and attitudes about race, class, gender, nationhood, age, religion, and sexuality evolved through various periods of literary study.
- 5. Produce quality written work reflecting the conventions of the field, including current MLA format, marked by high standards of clarity, coherence, organization and substantiation, and of various types including literary analysis/criticism, professional writing, research/scholarly writing, and informal/reflective writing.
- 6. Conduct both library and online research, by identifying and differentiating among various research methodologies.
- 7. Evaluate critical scholarship about literature, and integrate criticism into written and oral discussions of texts under study.
- 8. Write research papers that contribute new perspectives on current scholarly and methodological debates.

English Education (7–12; M.S.Ed.)

Master of Science in Education Program

Program Code: MSED-AS

Major Code: ENS

English Department Ketchum Hall 213 (716) 878-5416 english.buffalostate.edu/ Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in all other states</u>.

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.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

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. 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.
- 3. 27 credit hours in professional education, including secondary English methods and student teaching in middle or secondary schools.
- 4. Initial Certificate in English 7-12.

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

Togram negane.		
Required Courses	s (18 credit hours)	
ENG 569	LITERATURE & PROJECT-BASED LEARNING IN ENGLISH 7-12	3
ENG 691	ADVANCED STUDY IN THE TEACHING OF ENGLISH	3
ENG 692	THE TEACHING OF WRITING	3
ENG 693	RESEARCH IN THE TEACHING OF ENGLISH 7-12	3
ENG 694	TEACHING LITERATURE 7-12	3
EDU 620	TEACHING AND LEARNING IN DIVERSE CLASSROOMS	3
Electives (9-12 cr	redit hours)	
At least two elect	tives must be in literature. *	9-12

^{*}Possible English literature courses include: ENG 612 (British), ENG 621 (American), ENG 623 (Europe), ENG 638 (Studies in Individual Writers), and ENG 639 (Studies in Literary Genres), ENG 644 (Ideology and Literature), ENG 645 (Literature and Social Justice), and ENG 652 (Literary Criticism). Students also may select graduate courses from other appropriate departments, such as Elementary Education, Literacy, and

Educational Lead advisement.	dership, Exceptional Education, Social and Psychological Foun	dations of Education, under
Master's Project	or Comprehensive Examination (0-3 credit hours)	
Select one from	the following:	0-6
ENG 690	MASTER'S PROJECT	3
Comprehensive Examination		0
Total Credit Hou	Total Credit Hours 30	

Students will:

- 1. demonstrate knowledge of English language arts subject matter content that specifically includes literature and multimedia texts as well as knowledge of the nature of adolescents as readers.
- 2. demonstrate knowledge of English language arts subject matter content that specifically includes language and writing as well as knowledge of adolescents as language users.
- 3. plan instruction and design assessments for reading and the study of literature to promote learning for all students.
- 4. plan instruction and design assessments for composing texts (i.e., oral, written, and visual) to promote learning for all students.
- 5. plan, implement, assess, and reflect on research-based instruction that increases motivation and active student engagement, builds sustained learning of English language arts, and responds to diverse students' context-based needs.
- 6. demonstrate knowledge of how theories and research about social justice, diversity, equity, student identities, and schools as institutions can enhance students' opportunities to learn in English Language Arts.
- 7. interact knowledgeably with students, families, and colleagues based on social needs and institutional roles, engage in leadership and/or collaborative roles in English Language Arts professional learning communities, and actively develop as professional educators.
- 8. demonstrate applications of data literacy to inform instruction practice and classroom research.
- 9. demonstrate use of research and understanding of qualitative, quantitative and/or mixed methods research methodologies to inform their understanding of student learning and pedagogical practices.
- 10. demonstrate ability to employ data analysis and evidence to develop supportive, diverse, equitable, and inclusive school environments.
- 11. demonstrate the ability to lead and/or participate in collaborative activities with others such as peers, colleagues, teachers, administrators, community organizations, and parents.
- 12. demonstrate the ability to utilize appropriate applications of technology for their field of specialization.
- 13. demonstrate their ability to apply professional dispositions, laws and policies, codes of ethics and professional standards appropriate to their field of specialization.

English Literature Combined Pathway (B.A. and M.A.)

Bachelor of Arts Program Program Code: BA-AS Major Code: ENG Master of Arts Program Program Code: MA-AS Major Code: ENG

English Department Ketchum Hall 213 (716) 878-5416 english.buffalostate.edu/

Enrollment in a combined pathway allows highly qualified, current SUNY Buffalo State students to work on the Master of Arts in English while completing the bachelor's degree in English. Up to 12 credits of designated master's courses are incorporated into the bachelor's degree program and will count toward both the bachelor's degree and the master's degree.

The program requires careful planning that should begin in the second year of the student's undergraduate career at SUNY Buffalo State. The student and the primary adviser (or department chair) should consult in planning the undergraduate degree program so that all requirements are met during undergraduate study and up to 12 credits of master's courses from the MA Program in English are included in the degree plan. Students must meet graduate expectations for academic progress and grade point average in their master's level courses to remain in the combined pathway.

Admission Requirements

Admission into the combined pathway is highly selective. Applicants must have completed 24 credit hours in English, at least 18 of which must be in literature courses, with an overall GPA of 2.75 and a cumulative GPA of 3.0 in all English classes. Matriculated undergraduate students may apply to the BA/MA pathway immediately before or in their third year (junior year) or as rising seniors. Students transferring to Buffalo State may apply to the program in their junior year. To remain in the program, students must maintain a GPA of 3.0 or higher in all their English courses.

B.A. English

ENG 612

ENG 621

Program Requirements

General Education	Requirements	
33 credit hours		33
Required Courses (15 credit hours)	
ENG 190	INTRODUCTION TO LITERATURE	3
ENG 250	LITERARY MOVEMENTS	3
ENG 390	LITERARY CRITICISM AND THEORY	3
ENG 490	SENIOR SEMINAR IN LITERATURE	3
Select one of the fo	ollowing Major Figure courses (3 credit hours)	3
ENG 315	SHAKESPEARE	
ENG 322	REPRESENTATIVE WRITERS	
Undergraduate ele	ctives (18 credit hours)	12
above requirement	duate ENG literature courses by advisement. Courses that were not used to satisfy one of the ts can be used as an elective. Up to three courses in the MA program (not including ENG 601) may he undergraduate elective requirement.	
ENG courses on filr	m, writing, and education cannot be used to fulfill the English B.A. elective requirement.	
Required Graduate	e Courses (3 credit hours)	
ENG 601	RESEARCH IN LITERATURE AND LANGUAGE *	3
Choose up to 3 add	litional graduate elective courses (up to 9 credit hours)	0-9
Selected by adviser time.	ment. ENG 612, ENG 621, and ENG 623 may be taken up to three times with different topics each	

SELECTED TOPICS IN BRITISH LITERATURE **

AMERICAN LITERATURE **

ENG 623	LITERATURE OF CONTINENTAL EUROPE **
ENG 638	STUDIES IN INDIVIDUAL WRITERS **
ENG 639	STUDIES IN LITERARY GENRES **
ENG 644	IDEOLOGY AND LITERATURE **
ENG 645	LITERATURE AND SOCIAL JUSTICE **
ENG 670	ADVANCED LINGUISTICS **
At least three courses (9 credit hours) from among the undergraduate and graduate elective courses must be pre- 1900 literature courses.	

Total Credit Hours 69-78

- * Required M.A. course that will be used in B.A. and M.A. simultaneously (3 credit hours).
- ** Elective courses in the M.A. that will be used in B.A. and M.A. simultaneously (9 credit hours).

Students will:

- 1. Demonstrate an in-depth knowledge of the periods, genres, and major writers of British and American literature, and an awareness of the various critiques and revisions of this literature's canon.
- 2. Demonstrate familiarity with major movements or writers of literatures in English outside British and American literature, and be able to place that literature within worldwide cultural and literary trends.
- 3. Describe and explain how the literature is affected by cultural and historical forces.
- 4. Analyze how ideas and attitudes about race, class, gender, nationhood, age, religion, and sexuality evolved through various periods of literary study.
- 5. Produce quality written work reflecting the conventions of the field, including current MLA format, marked by high standards of clarity, coherence, organization, and substantiation, and of various types including literary analysis/criticism, professional writing, research/scholarly writing, and informal/reflective writing.
- 6. Conduct both library and online research, by identifying and differentiating among various research methodologies.
- 7. Evaluate critical scholarship about literature, and integrate criticism into written and oral discussions of texts under study.
- 8. Write research papers that contribute new perspectives on current scholarly and methodological debates.

Forensic Science (M.S.)

Master of Science Program Program Code: MS-AS Major Code: FSC

Chemistry Department SAMC 164 (716) 878-5204 chemistry.buffalostate.edu/

The master of science in forensic science provides advanced education in the scientific and laboratory methods utilized in a modern forensic laboratory. The program unites current theory and practices in forensic science with advanced laboratory training and an exploration of issues in the related disciplines of law enforcement and ethics.

Important Note: Individuals seeking employment in a forensic science laboratory may be required to undergo an extensive background check including a lie detector test, fingerprinting, and drug testing.

The curriculum for the program is structured around a core of advanced forensic science lecture and laboratory courses supplemented by electives in specialized sub-disciplines. The program includes a seminar component and culminates in a master's thesis or project based upon original scholarship carried out by the student.

Successful completion of this program requires that students have a strong background in math and science including laboratory experience in chemistry and biology upon admission. The program consists of 30-31 credit hours and should take two years to complete.

Admission Requirements

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

- 1. An official transcript of the applicant's undergraduate program showing successful completion of 48 credit hours of college science and mathematics courses, including the following coursework: one year of general chemistry, one year of organic chemistry with laboratory, a course in analytical chemistry, one year of general biology (including cell biology), a course in genetics or population genetics, and a course in either molecular biology or biochemistry.
- 2. A minimum GPA in the required chemistry and biology coursework of 2.9 (on a 4.0-point scale).
- 3. Three letters of recommendation from individuals who are familiar with the applicant's academic record.
- 4. A written statement concerning the applicant's academic background, future plans, and areas of research interest.

Required Courses (17	' credit hours)	
FOR 612	PRINCIPLES OF FORENSIC SCIENCE	3
FOR 614	FORENSIC APPLICATIONS OF INSTRUMENTAL ANALYSIS	4
FOR 616	MICROSCOPY IN FORENSIC SCIENCE	2
FOR 618	DRUG CHEMISTRY AND TOXICOLOGY	3
BIO/CHE 672	FORENSIC MOLECULAR BIOLOGY	4
CHE 698	JOURNAL SEMINAR	1
Approved Electives (6	5-9 credit hours) **	
Choose from the follo	owing:	6
CHE 572	ADVANCED BIOCHEMISTRY	
FOR 598	GRADUATE MICROCOURSE * (1-3)	
CHE 626	SYMMETRY, GROUP THEORY, AND VIBRATIONAL SPECTROSCOPY (1)	
CHE 627	X-RAY CRYSTALLOGRAPHY (1)	
CHE 628	NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY (1)	
CHE 629	MASS SPECTROMETRY (1)	
CHE 670	BIOMOLECULES: PROTEINS, NUCLEIC ACIDS, AND ENZYMES	
CHE 680	ADVANCED ANALYTICAL CHEMISTRY	
BIO 601	FOUNDATIONS OF CELL AND MOLECULAR BIOLOGY	
BIO 608	MOLECULAR GENETICS	
GES 513	APPLIED FORENSIC GEOSCIENCE	
CRJ 630	CONSTITUTIONAL ISSUES IN CRIMINAL JUSTICE	

Research Credit (4-8 credit hours)

Choose one of the following options:

1) Thesis Option (8 credit hours)

CHE 699 THESIS SEMINAR AND DEFENSE (2)

Select one research option:

FOR 795 RESEARCH THESIS IN FORENSIC SCIENCE (1-12)

CHE 795 RESEARCH THESIS IN CHEMISTRY (1-12)

BIO 695 RESEARCH THESIS IN BIOLOGY (1-6)

2) Project Option (4 credit hours)

FOR 690 MASTERS PROJECT (1-4)

or CHE 690 MASTER'S PROJECT

Note: while students can sign up for CHE 795, FOR 795, BIO 695 in anywhere from 1-12 crs, they must take a total of 6 credits for the degree.

Total Required Credit Hours 31

- * A maximum of 3 credits of FOR 598 may be used to the satisfy the elective course requirement.
- ** Students selecting the Thesis Option must take 6 credits of electives; students selecting the Project Option must complete 9 credits of electives.

Students will:

- 1. develop expertise in areas of scientific knowledge that are essential to forensic scientists
- 2. acquire skills and experience in the application of basic forensic science concepts and of specialty knowledge to problem solving
- 3. be oriented in professional values, concepts and ethics
- 4. acquire the basic knowledge necessary for effective testimony as an expert witness
- 5. demonstrate effective oral communication of scientific information
- 6. demonstrate integration of knowledge and skills through a capstone experience

Great Lakes Environmental Science (M.A.)

Master of Arts Program Program Code: MA-AS Major Code: GEE

Great Lakes Center
Chris Pennuto, Program Coordinator
Alexander Y Karatayev, Great Lakes Center Director
Science and Mathematics Complex 319
(716) 878-4329
greatlakescenter.buffalostate.edu/

The master of arts in Great Lakes Environmental Science program offers a strong foundation in environmental science and allows students to approach problems from a purely scientific perspective. Graduates are trained to effectively deal with a broad range of problems and issues related to ecosystem structure and function within the Great Lakes and surrounding watersheds, which prepares them for advanced research, professional employment, or study at the Ph.D. level.

Admission Requirements

- 1. A bachelor's degree in a science (e.g., chemistry, biology, geography, geology, earth science, environmental science) or math discipline from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale).
- 2. An official transcript of the applicant's undergraduate program giving evidence of satisfactory completion of college science and mathematics courses. It is strongly recommended that all applicants have introductory college coursework in chemistry, biology, geography, geology, and mathematics/statistics. The absence of any of this coursework may be regarded as a deficiency and students may be required to complete this recommended coursework before graduation.
- 3. Two letters of recommendation and completed survey evaluating the applicant's academic qualifications. It is highly desirable to have at least one letter of recommendation from a professor with whom the applicant has done coursework or projects.
- 4. A written statement of the applicant's academic background, academic and career plans, and area(s) of research interest. Applicants interested in completing a thesis must identify one or more potential faculty advisors with whom they are interested in working on their thesis research. This information should be included in the applicant's written statement. A list of GLES faculty participants can be found here: https://greatlakescenter.buffalostate.edu/gles-faculty. Applicants are strongly encouraged to contact potential faculty advisors prior to submitting their applications.

Program Requirements

-01			
Required Cor	re Courses (12 credit hours)		
GLC 535	GREAT LAKES ECOSYSTEMS	3	
BIO 670	BIOLOGICAL DATA ANALYSIS (or equivalent quantitative data analysis course)	3	
Select one fro	om the following:	3	
GEG 525	FUNDAMENTALS OF GIS		
GEG 528	ENVIRONMENTAL ASSESSMENT AND PLANNING APPLICATIONS IN GIS		
GEG 529	ADVANCED TOPICS IN GIS		
Elective Courses (15 credit hours)			
Appropriate biology, chemistry, earth sciences, and geography and planning courses selected by advisement.			
Master's Thesis (6 credit hours)			
GLC 695	MASTER'S THESIS	6	
Total Credit Hours 30			

All courses are 3 credit hours unless otherwise indicated

Students will:

- 1. demonstrate analytical skills required to interpret and evaluate research literature
- 2. demonstrate proficiency in scientific writing
- 3. demonstrate proficiency for effective oral communication of scientific information
- 4. plan and conduct research using accepted standards for ethical science

Great Lakes Environmental Science (M.S.)

Master of Science Program Program Code: MS-AS Major Code: GES

Great Lakes Center Chris Pennuto, *Program Coordinator* Alexander Y Karatayev, *Great Lakes Center Director*Science and Mathematics Complex 319
(716) 878-4329
greatlakescenter.buffalostate.edu/

The master of science in Great Lakes Environmental Science program combines coursework in environmental science with communication and project management classes and an internship experience. The M.S. program is designed to meet the needs of industry, consulting firms, nongovernmental organizations (NGOs), and governmental agencies, preparing graduates for leadership roles as they address a wide range of problems and issues related to the management of resources within the Great Lakes and surrounding watersheds.

Admission Requirements

- 1. A bachelor's degree in a science (e.g., chemistry, biology, geography, geology, earth science, environmental science) or math discipline from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale).
- 2. An official transcript of the applicant's undergraduate program, giving evidence of satisfactory completion of college science and mathematics courses. It is strongly recommended that all applicants have introductory college coursework in chemistry, biology, geography, geology, and mathematics/statistics. The absence of any of this coursework may be regarded as a deficiency and students may be required to complete this recommended coursework before graduation.
- 3. Two letters of recommendation and completed survey evaluating the applicant's academic qualifications. It is highly desirable to have at least one letter of recommendation from a professor with whom the applicant has done coursework or projects.
- 4. A written statement of the applicant's academic background, academic and career plans, and area(s) of research interest.

Required Core Courses (11 c	credit hours)	
GLC 535	GREAT LAKES ECOSYSTEMS	3
BIO 670	BIOLOGICAL DATA ANALYSIS (or equivalent quantitative data analysis course)	3
Select one from the following	ng:	3
GEG 525	FUNDAMENTALS OF GIS	
GEG 528	ENVIRONMENTAL ASSESSMENT AND PLANNING APPLICATIONS IN GIS	
GEG 529	ADVANCED TOPICS IN GIS	
Required Business Commun	ication and Project Management Courses (6 credit hours)	
Project Management (3 cred	dit hours)	
PSM 601	PROJECT MANAGEMENT FOR MATH AND SCIENCE PROFESSIONALS	3
or MMT 620	MANAGING ENGINEERING PROJECTS	
Communication (3 credit ho	urs)	
Select one from the following:		3
PSM 602	COMMUNICATION STRATEGIES FOR MATH AND SCIENCE PROFESSIONALS	
COM 519		

COM 610	PUBLIC RELATIONS PRINCIPLES AND PRACTICES	
Required Internship	(3 credit hours)	
GLC 688	INTERNSHIP	3
Elective Courses (12	2 credit hours)	
Appropriate biology advisement.	, chemistry, earth sciences, and geography and planning courses selected by	12
Total Credit Hours		30

Students will:

- 1. demonstrate analytical skills required to interpret and evaluate research literature
- 2. demonstrate proficiency in professional writing
- 3. demonstrate comprehension of the broad aspects of project management and communication strategies.
- 4. demonstrate ability to effectively organize oral presentation for either informal or formal settings

Higher Education and Student Affairs Administration (M.S.)

Master of Science Program Program Code: MS-SP Major Code: HEA

Higher Education Administration and Adult Education Department Bacon Hall 214C, (716) 878-3789 hea.buffalostate.edu/

The Higher Education and Student Affairs Administration (HESAA) program is a professional preparation program for individuals who are interested in pursuing careers in college and university settings, supporting students in and out of the classroom in functional areas such as academic advising, residence life, student engagement, financial aid, study abroad, and many more. The HESAA degree is a multifaceted program that blends counseling and student development knowledge with administrative and assessment skills, to prepare professionals to work with an increasingly diverse college population. The HESAA program prepares professionals who are socially just, authentic, reflective and collaborative, who will transform systems of higher education for greater student success. The program prepares scholar practitioners who possess the knowledge, skills, and dispositions to advocate for full and equitable participation of all individuals in post-secondary institutions.

Admission Requirements

- 1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale). Applicants who hold a bachelor's degree but do not meet the minimum GPA requirement may be granted provisional acceptance based on the additional requirements.
- 2. A current resume. Consideration can be given to work-related experience and involvement in the field.
- 3. <u>Two</u> letters of recommendation, of which at least one must be from a former faculty/instructor who can speak to your academic and classroom performance.
- 4. A Statement of Purpose which addresses your understanding of and interest in the HESAA program, identifies qualities and characteristics you will contribute as a member of the program, and addresses your academic preparedness for graduate course work. If your GPA falls below the required 3.0 GPA, please address this in your statement of purpose. Your statement will be evaluated as a writing sample.

An interview with HESAA program faculty may be required.

Required Co	Required Courses (27 credit hours)	
HEA 616	AMERICAN HIGHER EDUCATION	3
HEA 617	STUDENT DEVELOPMENT AND LEARNING	3

HEA 618	STUDENT AFFAIRS ADMINISTRATION	3
HEA 620	STRATEGIC PLANNING AND BUDGETING IN HIGHER EDUCATION	3
HEA 622	INCLUSIVE ADVISING AND SUPPORTING	3
HEA 624	SUPERVISED PRACTICE I	3
HEA 625	SUPERVISED PRACTICE II	3
HEA 650	ASSESSMENT IN HIGHER EDUCATION AND STUDENT AFFAIRS	3
HEA 689	RESEARCH METHODS IN HIGHER EDUCATION	3
Elective Cou	ırses (9 credit hours) 1	
Select three	from the following (3 credits each):	9
HEA 504	COMMUNITY COLLEGE ADMINISTRATION	
HEA 588	TOPICS IN HIGHER EDUCATION	
HEA 590	INDEPENDENT STUDY (1-6)	
HEA 591	GENDER, INTERSECTIONALITY, AND HIGHER EDUCATION	
HEA 615	SURVEY DESIGN FOR PROFESSIONALS	
HEA 619	MANAGEMENT SYSTEMS AND LEADERSHIP IN HIGHER EDUCATION	
HEA 623	COUNSELING TECHNIQUES FOR DIVERSE CULTURES	
HEA 630	GROUP COUNSELING	
HEA 632	CAREER DEVELOPMENT	
HEA 651	THE LAW AND HIGHER EDUCATION	
HEA 670	MOVEMENTS OF RESISTANCE: COLLEGE STUDENT ACTIVISM	
HEA 694	CURRENT ISSUES IN HIGHER EDUCATION	
HEA 695	MASTER'S THESIS	
HEA 703	PROFESSIONAL DEVELOPMENT AND COMMUNITIES OF PRACTICE IN HIGHER EDUCATION	
HEA 725	FUNDAMENTALS OF INSTITUTIONAL RESEARCH	
HEA 730	DATA VISUALIZATION AND STORYTELLING	
HEA 789	ADVANCED DATA ANALYSIS TECHNIQUES IN HIGHER EDUCATION	
Other elect adviser app	ve courses may be selected from related courses/workshops in various disciplines or interdisciplinary areas with roval.	
Total Credit	Hours	36

¹ Selected under advisement

Graduation Requirements

A minimum of 36 credit hours are needed for degree completion: 27 credit hours of required coursework and 9 hours of electives. Students must complete two supervised practice experiences for credit as part of the curriculum and successfully complete the culminating experience.

Students will:

- 1. Develop the knowledge, skills and dispositions necessary to create inclusive learning environments, while seeking to address and acknowledge issues of oppression, privilege and power.
- 2. Be able to design an assessment plan, articulate learning and development outcomes, understand the distinctions between qualitative and quantitative methodologies, and select appropriate data collection and management methods.
- 3. Have fundamental knowledge of theories and principles of fiscal management, strategic planning, supervision, organizational administration, and an understanding of the cultural and political landscape of higher education.
- 4. Demonstrate the ability to work collaboratively, combining analytical and experiential learning. Graduates will be able to connect information from disparate contexts and perspectives.
- 5. Develop the knowledge, skills and dispositions to demonstrate and maintain integrity in their personal and professional lives.
- 6. Have a command of the complexity of American higher education and will understand the impact of race, ethnicity, gender, and class on the evolution of higher education.

- 7. Understand the major theories of student development and learning and be able to apply the theories and frameworks inside and outside the classroom, construct learning outcomes, and design of programs to enhance student affairs and teaching practice.
- 8. Develop the requisite knowledge, skills and dispositions for advising and supporting groups and individuals through direction, feedback, critique, referral and guidance.
- 9. Develop the knowledge, skills and dispositions that support digital literacy and the use of digital tools, resources and technologies for the advancement of student learning and success.

History (M.A.)

Master of Arts Program Program Code: MA-AS Major Code: HIS

History and Social Studies Education Department Cassety Hall 302 (716) 878-5412 history.buffalostate.edu/

Advisement

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

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.

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

Program Requirements Required Courses (18 credit hours) Selected under advisement from department course offerings in the following areas: 18 United States and Canada Europe World History Special Topics courses Up to six credit hours may be taken in related disciplines with prior approval of the student's advisor and the department chair. Seminars (6 credit hours) 6 credit hours at the 700 level 6 Capstone (6 credit hours)

Select one from the following:		6
HIS 795	MASTER'S THESIS (1-6)	
One additional 600 or 700 research seminar and Comprehensive Exam		
Total Credit H	ours	30

Graduation Requirements

- 1. At least fifteen credit hours of coursework at the 600 or 700 level.
- 2. Either a master's thesis or a comprehensive exam:
 - Master's thesis and defense: the student, in consultation with his or her academic advisor and second reader, prepares and submits a written thesis. Once approved, the student must successfully provide an oral defense. The approved thesis is submitted according to approved guidelines of the department.
 - 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.
 - Comprehensive examination: under advisement, the student will prepare three fields and will answer questions from his or her examiners.
- 3. Demonstrated competence in a foreign language may be required. If applicable, competency examinations will be arranged by the thesis advisor and approved by the department chair.

Students will:

- 1. demonstrate mastery of subject material
- 2. demonstrate knowledge of historiography
- 3. be able to identify and interpret primary sources
- 4. understand the relationship between cause and effect
- 5. appreciate different cultural patterns, behaviors, actions, and the influence of ideas on human behavior
- 6. be able to write clearly and effectively according to the standards and the conventions of the historical profession

Industrial Technology (M.S.)

Master of Science Program Program Code: MS-SP Major Code: IDT

Engineering Technology Department Technology Building 126, (716) 878-6017 engineeringtechnology.buffalostate.edu/

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

- 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.

Application Procedures

Obtain application information online through the Graduate Studies website.

Request sealed official transcripts from all higher education institutions attended and submit them with the complete application packet to Graduate Studies.

Obtain approval from the Graduate Studies Committee, the department chair.

Admission applications are not complete until all required forms, documents, and data are received.

Required Courses (12 cre	dit hours)	
INT/ECO 601	ENGINEERING ECONOMY	3
INT 602	OPERATIONS MANAGEMENT (ADVANCED SYSTEMS ANALYSIS)	3
INT 659	INTEGRATED INDUSTRIAL SYSTEMS	3
INT 689	RESEARCH DESIGN AND METHODOLOGY	3
Elective Courses (12-18 c	redit hours)	
Select 12-18 credit hours	of the following: 1	12-18
BUS/HIS 536	THE AMERICAN ENTERPRISE SYSTEM	
HIS 607	THE UNITED STATES 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 STUDY	
INT 670	PRODUCTION AND INVENTORY MANAGEMENT	
INT 675	JUST-IN-TIME MANUFACTURING	
Master's Project, Master's Thesis, or Comprehensive Examination (0-6 credit hours)		
Select one from the following: 0-6		0-6
INT 690	MASTER'S PROJECT (1-3)	

Comprehensive Examination

Total Credit Hours 30

¹ Selected under advisement

All courses are 3 credit hours unless otherwise indicated.

Students will be able to:

- 1. Demonstrate competence in written and/or oral communication.
- 2. Demonstrate knowledge of how to apply analytical methods to the solution of manufacturing and service-related problems.
- 3. Demonstrate knowledge of research methods and their application to the structuring of complex investigations.
- 4. Demonstrate knowledge of how to apply principles of industrial technology management (e.g.: engineering economics; production operations management; project planning; quality; automation; plant layout; marketing) to the solution of technology-based problems.
- 5. Demonstrate knowledge of lean production methods.

Literacy Specialist (Birth Through Grade 12; M.S.Ed.)

Master of Science in Education Program

Program Code: MSED-EP

Major Code: LBT

Elementary Education, Literacy and Education Leadership Department

Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Bacon Hall 302, (716) 878-5916

elementaryeducation.buffalostate.edu/

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in</u> all other states

This program prepares professional literacy specialists to provide instruction for students with reading or writing difficulties. Graduates of this program will also be able to serve as effective resources and leaders for school-wide literacy curriculum and instruction. Students who successfully complete this program are eligible for a college recommendation for professional NYS certification in Literacy Birth - Grade 12.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

Admission Requirements

- 1. Have a degree from an accredited college or university leading to New York State initial teacher certification.
- 2. A minimum cumulative GPA of 3.0 (4.0 scale) in undergraduate work. Please submit all transcripts.
- 3. Write a well-crafted statement addressing the following:
 - a. Your reasons for seeking Literacy Specialist certification
 - b. The professional challenge(s) you encountered during your field experiences/first classroom experiences that you hope to address in your graduate work
 - c. Discuss what you hope to learn in your graduate program focusing on your interest in working with striving readers . Your statement will be evaluated according to the following criteria (see rubric):
 - i. Organization
 - ii. Conventions of language
 - iii. Content

- iv. Interest in working with struggling readers, rationale, and significant support for rationale
 Note: Please refer to the rubric provided with the application materials for the statement prompts and specific evaluation criteria.
- 4. Submit three letters of reference that attest to the applicant's potential as a literacy specialist on the specific forms that are part of the supplemental materials. Please note that references should be from professors, school administrators, cooperating teachers (only one), or student teaching supervisors (only one).
- 5. Submit a professional resume

Applicants will be judged on demonstrated academic records; the strength of recommendations, and the quality of the candidate's statement.

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

Program Requirements

Required Courses (36 co	redit hours)	
EDU 513	THEORY, RESEARCH AND PRACTICE IN LITERACY INSTRUCTION	3
EDU 535	TEACHING WRITING: B-12	3
EDU 606	LITERACY INSTRUCTION FOR CULTURALLY AND LINGUISTICALLY DIVERSE STUDENTS	3
EDU 609	RESEARCH AND PRACTICE IN ADOLESCENT LITERACY	3
EDU 611	EARLY LITERACY INSTRUCTION	3
EDU 612	DEVELOPING LITERACY THROUGH LITERATURE	3
EDU 642	LITERACY ASSESSMENT AND EVALUATION	3
EDU 643	TEACHING STRATEGIES FOR READING AND WRITING INTERVENTION	3
EDU 646	LITERACY LEADERSHIP	3
EDU 647	PRACTICUM IN LITERACY	3
EDU 650	LITERACY THEORY AND RESEARCH	3
EDU 655	TEACHING OF LITERACY: GRADUATE SEMINAR	3
Total Credit Hours		36

Program may be completed on a part-time basis through advisement. Pre-requisites apply.

Mathematics Education (7–12; M.S.Ed.)

Master of Science in Education Program Program Code: MSED-AS

Major Code: MTS

Mathematics Department SAMC 159 (716) 878-5621 mathematics.buffalostate.edu/ Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in</u> all other states

This program is designed to develop, enhance, and extend the content knowledge and professional competencies of secondary mathematics teachers.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

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 all undergraduate mathematics courses.
- 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 calculusbased 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 director of the Graduate Studies Office.
- 4. Initial Certificate in Mathematics 7-12.

Mathematics Courses	(12-15 credit hours)	
Select from the following:		12-15
MAT 501	MATH FOR TEACHERS: ALGEBRA	
MAT 521	MATH FOR TEACHERS: GEOMETRY	
MAT 581	MATHEMATICS FOR TEACHERS: PROBABILITY AND STATISTICS	
MAT 601	TOPICS IN MODERN ALGEBRA ¹	
MAT 611	TOPICS IN REAL ANALYSIS ¹	
MAT 620	MODERN GEOMETRY:SELECTED TOPICS (1-3)	
MAT 631	FOUNDATIONS OF MATHEMATICS	
MAT 651	THEORY OF NUMBERS	
MAT 670	DISCRETE MATHEMATICS AND FOUNDATIONS OF COMPUTER SCIENCE	
MAT 681	INTERMEDIATE PROBABILITY	
MAT 683	STATISTICAL THEORY	
MAT 696	HISTORY OF MATHEMATICS	

MAT 699	SELECTED ADVANCED TOPICS	
MAT 701	MODERN ALGEBRA I	
Mathematics Education	Courses (6-9 credit hours)	
Select from the following	ng:	6-9
MED 601	SEMINAR IN THE TEACHING OF MATHEMATICS	
MED 602	MATHEMATICS FOR THE SECONDARY SCHOOL TEACHER: SELECTED TOPICS	
MED 604	TEACHING OF GEOMETRIC CONCEPTS	
MED 605	TEACHING OF ALGEBRAIC CONCEPTS	
MED 606	LOGO AND MATHEMATICS LEARNING	
MED 607	TECHNOLOGY IN MATHEMATICS EDUCATION	
MED 683	PROBLEM SOLVING AND PROBLEM POSING	
Curriculum and Researc	h Courses (6 credit hours)	
MED 595	RESEARCH METHODS AND TECHINQUES IN MATHEMATICS EDUCATION	3
MED 600	CONTEMPORARY MATHEMATICS CURRICULUM DEVELOPMENT	3
Master's Project or Master's Thesis (3-6 credit hours)		
MED 690	MASTER'S PROJECT	3-6
or MED 795	MASTER'S THESIS IN MATHEMATICS EDUCATION	
Total Credit Hours		30

¹ Required if not part of student's undergraduate program.

Students will:

- 1. demonstrate content knowledge in secondary mathematics.
- 2. demonstrate ability to plan instruction.
- 3. Demonstrate effect on student learning.

Multidisciplinary Studies (M.A.)

Master of Arts Program Program Code: MA-GR Major Code: MUL

Individualized Studies and Multidisciplinary Studies Program Keith Fulcher, Director South Wing 310B (716) 878-5303 The Multidisciplinary Studies Program Individualized Track is 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 design their own degree program by selecting graduate courses from select academic departments at the college or from other accredited institutions.

Upon satisfactory completion of an approved course of study, a Master of Arts (M.A.) degree is awarded.

Individualized Track

Through advisement and within certain guidelines, the Individualized track allows students to design their own programs by selecting graduate courses from any department at the college or from other accredited institutions.

Guidelines for Designing a Multidisciplinary Studies Curriculum

A variety of curriculum options, depending upon student interest may be used to design a curriculum. The first step is for students to select graduate course work from a variety of academic areas at Buffalo State which may include, but not limited to: Adult Education, Applied Economics, Biology, Business Management, Computer Information Systems, Creativity and Change Leadership, Criminal Justice, Data Science and Analytics, Design, Education, English, Fine Arts, Great Lakes Environmental Science, Health, Nutrition and Dietetics, Higher Education and Student Affairs Administration, History, Mathematics, Public Administration in Public and Nonprofit Management, Public Relations, and Social and Psychological Foundations. Only graduate course work may be included in the Multidisciplinary Studies master's program.

When designing a curriculum, it is important to select a specific content area for which your main course work and cumulating experience (Master's Thesis) will reside. Once content courses have been determined, the student must seek out a graduate faculty member (with graduate faculty status designation) from a department directory to work with. A copy of the Statement of Intent and the Principal Adviser Consent Form must be provided to the identified faculty member who has agreed to work with the student. Students who need assistance identifying a principal adviser should contact the director in the Academic Affairs Office. In addition to content course work, elective courses must also be included the curriculum. Elective courses may vary and should complement the student's educational and professional objectives. Elective course options can be found in the course description section of the Graduate Catalog.

The flexibility of the Multidisciplinary Studies program allows for up to 15 credit hours of transfer work based upon the approval of the principal adviser and advisory committee (if required). See Transfer Credit Policy for guidelines.

See Program Requirements for additional information and guidelines for designing a Multidisciplinary Studies Curriculum.

Advisement

After completing the statement of intent and meeting with the program coordinator, students identify a principal adviser. The principal adviser reviews the statement of intent and eventually approves a plan of study and agrees to serve as thesis adviser. A detailed plan of study, including specific courses, may be required.

When a principal adviser has been secured the Principal Adviser Consent Form must be completed.

The principal adviser also enumerates any additional requirements the student must complete before being permitted to advance to candidacy, including but not limited to requiring that the student must identify a second adviser to support the course of study and read the eventual thesis.

The principal adviser is charged with working closely with the student throughout the plan of the study and with service as a point of contact with the Graduate Studies Office to support and advise the student. It is the student's responsibility to initiate and maintain contact and ongoing communication with the principal adviser.

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 two- to three-page statement of intent (essay) that includes the following:
- 3. educational and professional objectives;
- 4. an explanation of the reasons for interest in a nontraditional study format; and
- 5. a detailed outline of the proposed plan of study, including specific courses.

Identification and consent of a principal adviser. Information regarding advisement can be found in the Overview section. (Those students who need assistance identifying a principal adviser should contact the director in the Academic Affairs Office).

After the completed application is received the student will be contacted to set up an appointment for an interview with the director.

Program Requirements

- 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.
- 2. 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).
- 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), meet the requirements of the Transfer Credit policy, and have the prior approval of the principal adviser.
- 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 Studies Office.
- 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 approved by the principal adviser and a second reader. Individual principal advisers may impose further requirements on candidates based on practices and policies of their home department (third reader or oral defense, for example). These must be specified in writing at the outset of the degree program on the completed Principal Adviser Consent Form.

A Degree Candidacy Application Form, approved by the student's principal, secondary, and tertiary (if required) must be submitted to the director before the completion of 12 credit hours at Buffalo State.

Students completing degree requirements each spring semester are requested to submit designated assignments/artifacts in Taskstream by the close of the semester for the Multidisciplinary Studies Program Assessment.

Students will:

- 1. Demonstrate effective and appropriate communication skills through coherent and well-organized written presentations.
- 2. Demonstrate effective and appropriate communication skills through coherent and well-organized oral and visual presentations.
- Demonstrate the ability to creatively use information, concepts, analytical approaches, and critical thinking skills in one or more disciplines. Competency in making connections that will synthesize and transfer learning to new and complex situations.
- 4. Ethically identify, access, critically evaluate, and apply information throughout collections of work.
- 5. Demonstrate a basic knowledge of research design, methodology, and measurement strategies that addresses a problem in the field.
- 6. Demonstrate analytical skills through self-reflection to assess individual performances or collections of work. Show evidence of personal, professional, and civic engagement/development.

Multidisciplinary Studies, Individualized Track (M.S.)

Master of Science Program Program Code: MS-GR Major Code: MUL

Individualized Studies and Multidisciplinary Studies Program Keith Fulcher, Director South Wing 310B (716) 878-5303

The Multidisciplinary Studies Program Individualized Track is 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 design their own degree program by selecting graduate courses from academic departments at the college or from other accredited institutions. The Individualized Track courses are offered on campus and 100 percent online (select courses). Upon satisfactory completion of an approved course of study, a Master of Science (M.S.) degree is awarded.

Individualized Track

Through advisement and within certain guidelines, the Individualized Track allows students to design their own program by selecting graduate courses from appropriate academic areas at the college or from other accredited institutions.

Guidelines for Designing a Multidisciplinary Studies Curriculum

A variety of curriculum options, depending upon student interest may be used to design a curriculum. The first step is for students to select graduate course work from a variety of academic areas at Buffalo State which may include, but not limited to: Adult Education, Applied Economics, Biology, Business Management, Computer Information Systems, Creativity and Change Leadership, Criminal Justice, Data Science and Analytics, Design, Education, English, Fine Arts, Great Lakes Environmental Science, Health, Nutrition and Dietetics, Higher Education and Student Affairs Administration, History, Mathematics, Public Administration in Public and Nonprofit Management, Public Relations, and Social and Psychological Foundations. Only graduate coursework may be included in the Multidisciplinary Studies master's program.

When designing a curriculum, it is important to select a specific content area for which your main coursework and culminating experience (Master's Project) will reside. Once content courses have been determined, the student must seek out a graduate faculty member (with graduate faculty status designation) from a department directory to work with. A copy of the Statement of Intent and the Principal Adviser Consent Form must be provided to the identified faculty member who has agreed to work with the student. Students who need assistance identifying a principal adviser should contact the director.

In addition to content coursework, elective courses must also be included the curriculum. Elective courses may vary and should complement the student's educational and professional objectives. Elective course options can be found in the course description section of the Graduate Catalog.

The flexibility of the Multidisciplinary Studies program allows for up to 15 credit hours of transfer work based upon the approval of the principal adviser and advisory committee (if required). See Transfer Credit Policy for guidelines.

See Program Requirements for additional information and guidelines for designing a Multidisciplinary Studies Curriculum.

Advisement

After completing the statement of intent and meeting with the program coordinator, students identify a principal adviser. The principal adviser reviews the statement of intent and eventually approves a plan of study and agrees to serve as thesis adviser. A detailed plan of study, including specific courses, may be required.

When a principal adviser has been secured, the Principal Adviser Consent Form must be completed.

The principal adviser may also enumerate any additional requirements the student must complete before being permitted to advance to candidacy, including but not limited to requiring that the student identify a second reader (if needed) to support the course of study and read the eventual project.

The principal adviser is responsible for working closely with the student throughout the plan of the study and with service as a point of contact with the director to support and advise the student. It is the student's responsibility to initiate and maintain contact and ongoing communication with the principal adviser.

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 two- to three-page statement of intent (essay) that includes the following:
- 3. educational and professional objectives;
- 4. an explanation of the reasons for interest in a nontraditional study format; and
- 5. a detailed outline of the proposed plan of study, including specific courses.
- 6. Identification and consent of a principal adviser. Information regarding advisement can be found in the Overview section. (Those students who need assistance identifying a principal adviser should contact the director in the Academic Affairs Office.
- 7. After the completed application is received the student will be contacted to set up an appointment for an interview with the director.

- 1. Completion of a minimum of 30 credit hours, comprising at least 15 hours of 600- and 700-level courses, including the master's project.
- 2. 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), meet the requirements of the Transfer Credit policy, and have the prior approval of the principal adviser.

- 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 Studies Office.
- 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 Science candidates must complete a) a research methods course and b) a supervised project approved by the principal adviser. Individual principal advisers may impose further requirements on candidates based on practices and policies of their home department (second reader or oral defense, for example). These must be specified in writing at the outset of the degree program on the completed Principal Adviser Consent Form.

A Degree Candidacy Application Form, approved by the student's principal, secondary (if required), and tertiary (if required) must be submitted to the director before the completion of 12 credit hours at Buffalo State.

Students completing degree requirements each spring semester are requested to submit designated assignments/artifacts in Taskstream by the close of the semester for the Multidisciplinary Studies Program Assessment.

Students will:

- 1. Demonstrate effective and appropriate communication skills through coherent and well-organized written presentations.
- 2. Demonstrate effective and appropriate communication skills through coherent and well-organized oral and visual presentations.
- 3. Demonstrate the ability to creatively use information, concepts, analytical approaches, and critical thinking skills in one or more disciplines. Competency in making connections that will synthesize and transfer learning to new and complex situations.
- 4. Ethically identify, access, critically evaluate, and apply information throughout collections of work.
- 5. Demonstrate a basic knowledge of research design, methodology, and measurement strategies that addresses a problem in the field.
- 6. Demonstrate analytical skills through self-reflection to assess individual performances or collections of work. Show evidence of personal, professional, and civic engagement/development.

Music Education (M.M.)

Master of Music Program Program Code: MM-AS Major Code: MUS

Music Department
Rockwell Hall 203
716-878-6401
National Association of Schools of Music (Accredited)
http://music.buffalostate.edu/

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in</u> all other states

The Mus.M degree is designed for the in-service music teacher who already possesses an initial Teaching Certificate. The degree program will help students become accomplished reflective educators as indicated by the Buffalo State College Teacher Education Unit Conceptual Framework for advanced programs. This online degree is comprised of courses that are critical to the ongoing professional development of the music teacher. The entire program will require 30 credits and includes 24 credits of required graduate coursework in music history, music theory, music education, and a master's project or master's thesis. An additional six credits of elective coursework will include graduate courses chosen from repertoire and ensemble leadership, educational foundations, musical theatre, and a flexible independent study. The department anticipates developing additional elective graduate offerings in the areas of music education, music technology, music history, music theory, composition, and/or performance after the initial implementation of the degree.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu

Admission Requirements

- 1. A bachelor's degree from an accredited college or university with a minimum cumulative grade point average of 3.0 (on a 4.0 scale).
- 2. Bachelor's degree in music education from an accredited institution. It must also adhere to the general guidelines for undergraduate competencies in music theory, music history, music performance, conducting, ensemble participation and music education preparation as established by the National Association of Schools of Music (NASM). Students must have earned a minimum cumulative GPA of 3.0 in required music courses in their undergraduate degrees.
- 3. Three letters of recommendation from persons familiar with the applicant's academic background, musicianship and teaching effectiveness. This letter should provide evidence of successful teaching experience, academic ability and professionalism.
- 4. A resume of educational and professional achievements.
- 5. A scholarly writing sample of no less than 4 and no more than 15 pages using appropriate citations and sources in the area(s) of music theory, music history, music education or educational psychology.
- 6. Although not required, formal music teaching experience in public or private school systems is preferred.

Applicants may be asked to participate in a phone or on-line interview at the discretion of the music education coordinator. Initial Certificate in Music.

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

Additional Admission Requirements for those Applicants Seeking New York State Professional Certification New York State Initial Certification. (Those students seeking New York State Professional Certification with teaching certificates/licenses from states other than New York must apply for and be granted a New York State Initial Teaching Certificate. Requirements for obtaining a New York State Initial Teaching Certificate can be found by visiting the following link: usny.nysed.gov/teachers/)

A minimum of one 3-credit hour course involving students with special needs. Transcripts must be provided that document a course which entails instruction regarding the understanding and development of effective teaching strategies for students with special needs. Students without documentation of a special needs class will be required to remediate this requirement by taking EXE 100-Individuals with Special Needs, offered online. This course will not fulfill the course requirements of the Mus. M. in Music Education. Additional coursework, (currently only offered in traditional format) that fulfill this requirement and also fulfill elective credits for the Mus.M in Music Education degree, include: EDU 577 Teaching Individuals with Exceptionalities and EXE 500 Individuals with Special Needs.)

Please Note: Applications accepted for Summer admission.

Music History/Theory (6 credit hours)		
MUS 602	ADVANCED TOPICS IN MUSIC HISTORY	3
MUS 620	ADVANCED TOPICS IN MUSIC THEORY	3
Music Education (12 credit hours)		
MUS 601	FOUNDATIONS OF MUSIC EDUCATION	3
MUS 625	CURRICULUM AND ASSESSMENT	3
MUS 630	CONTEMPORARY ISSUES IN MUSIC EDUCATION	3
MUS 640	RESEARCH METHODS IN MUSIC EDUCATION	3

Electives (6-9 credit ho	ours)	
Select from the follow	ring:	6-9
SPF 503	EDUCATIONAL PSYCHOLOGY	
MUS 590	INDEPENDENT STUDY (1-3)	
MUS 608	JAZZ STYLES AND ANALYSIS	
MUS 615	PIANO PEDAGOGY FOR CHILDREN	
MUS 624	SOCIAL COMMENTARY IN MUSICAL THEATRE	
MUS 641	REPERTOIRE AND ENSEMBLE LEADERSHIP	
MUS 644	SECONDARY GENERAL MUSIC METHODS	
MUS 665	METHODS OF EARLY CHILDHOOD MUSIC AND MOVEMENT	
Project/Thesis (3-6 cre	edit hours)	
MUS 690	MASTER'S PROJECT	3,6
or MUS 695	THESIS	
Total Credit Hours		30

Program Learning Outcomes

- 1. Students will develop advanced capacities to work independently and make effective artistic and intellectual judgments and professional decisions in the area of specialization.
- 2. Students will demonstrate professional competence in the area of specialization before peers and faculty.
- 3. Students will produce a final project or some equivalent reviewed by more than one faculty member.
- 4. Students demonstrate advanced competencies in music education
- 5. Students gain knowledge and skills in one or more fields of music outside the major such as performance, conducting, theory and analysis, and history and literature.
- 6. Students develop graduate-level perspectives on contemporary issues and problems in music education. This may include a review of curriculum developments, teaching methodology, innovations, and multidisciplinary concepts.
- 7. Students will complete a research-oriented program emphasizes theoretical studies and research projects in music. Student will demonstrate an understanding of research concepts and their application to the field of music education.

Physics Education (7-12, M.S.Ed.)

Master of Science Education Program Program Code: MSED-AS Major Code: PHS

Physics Department
Dan L. MacIsaac, Chair and Coordinator
SAMC 278
(716) 878-3802
physics.buffalostate.edu/

Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in all other states</u>

Applicants who do not yet meet all admissions criteria should consult with the department. The master of science in physics education is designed for teachers who wish to combine advanced work in physics with graduate work in education.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

Admission Requirements

- 1. A bachelor's degree in physics from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale).
- 2. An application packet, including a personal statement and three letters of reference.
- 3. An interview may be required.
- 4. Initial Certificate in Physics 7-12.

Program Requirements

Requirements (22 cr hrs.)			
PHY 500	PHYSICS EDUCATION RESEARCH SEMINAR	3	
PHY 510	REGENT'S PHYSICS SCIENCE PRACTICES	4	
PHY 620	MECHANICS FOR HIGH-SCHOOL TEACHERS	6	
PHY 622	ELECTRICITY AND MAGNETISM FOR HIGH SCHOOL TEACHERS	6	
PHY 690	MASTER'S PROJECT	3	
Elective Courses 9 cr hour.	s (Select 3 from the following)	9	
PHY 511	COMPUTATIONAL PHYSICS FOR TEACHERS		
PHY 518	WAVE PHENOMENA AND OPTICS FOR TEACHERS		
PHY 520	MODERN PHYSICS FOR TEACHERS		
PHY 521	EXPERIMENTS IN MODERN PHYSICS FOR TEACHERS		
PHY 522	ENERGY: SUSTAINABILITY AND RENEWABILITY FOR TEACHERS		
PHY 525	NUCLEAR AND PARTICLE PHYSICS FOR TEACHERS		
PHY 590	INDEPENDENT STUDY (1-3)		
SED 664	TEACHING SCIENCE WITH TECHNOLOGY		
SED 685	EVALUATION IN SCIENCE EDUCATION		

All courses are 3 credit hours unless otherwise indicated.

Total Credit Hours 31

Psychological Science, B.S. and Applied Behavior Analysis, M.S. Combined Pathway

Bachelor of Arts Program Program Code: BA-AS Major Code: PYA

Psychology Department Buckham Hall A238 (716) 878-6215 psychology.buffalostate.edu/

Master of Science Program Code: MSED-ED Major Code: ABA

Exceptional Education Department Ketchum Hall 204 (716) 878-3038 exceptionaleducation.buffalostate.edu/

Enrollment in this combined pathway allows highly qualified, currently-enrolled SUNY Buffalo State students to begin work on a M.S. degree in Applied Behavior Analysis (ABA) while completing a B.S. degree in Psychological Science. Twelve (12) credits of designated master's courses would be incorporated into the B.S. program and count toward both the bachelor's degree and the master's degree.

Admission Requirements

Admission into the combined pathway is highly selective. Matriculated undergraduate students may apply to the BS/MS pathway in their junior year and will complete all of the application requirements for the program. The admission application process includes a minimum GPA of 3.0 overall and in Psychology, a statement of intent, and names of 3 references.

General Education 23 Requirements			
33 credit hours		33	
Psychology Major Requirements (42 credit hours)		· 	
Required Cours	Required Courses (18 credit hours)		
PSY 101	INTRODUCTION TO PSYCHOLOGY	3	
PSY 350	STATISTICS IN PSYCHOLOGICAL RESEARCH ¹	3	
PSY 450	RESEARCH METHODS IN PSYCHOLOGY I: INTRODUCTION TO RESEARCH METHODS ²	3	
PSY 471	HISTORY AND SYSTEMS OF PSYCHOLOGY	3	
PSY 472	SEMINAR ON PSYCHOLOGY	3	
Select one from the following:		3	

PSY 488	INTERNSHIP (3-15)	
PSY 495	SPECIAL PROJECT (1-3)	
PSY 499	INDEPENDENT STUDY (3-12)	
The prerequising noted.	te for all 300-level courses is PSY 101 with a grade of C or better unless otherwise	
Students must	select one course from each of the following groups.	
Biological/Cog	nitive Psychology	
Select one of the	he following by advisement:	3
PSY 304	LEARNING: THEORY AND RESEARCH	
PSY 308	SENSATION AND PERCEPTION	
PSY 321	COMPARATIVE ANIMAL BEHAVIOR	
PSY 330	THE PSYCHOLOGICAL POWER OF LANGUAGE	
PSY 333	BRAIN AND BEHAVIOR	
PSY 340	COGNITIVE PSYCHOLOGY	
Clinical Psycho	logy	
Select one of the	Select one of the following by advisement: 3	
PSY 392	ABNORMAL PSYCHOLOGY ³	
Applied Psycho	ology and Diversity	
Select one of the	he following by advisement:	3
PSY 365	PSYCHOLOGY IN THE WORKPLACE	
PSY 367	ORGANIZATIONAL BEHAVIOR	
PSY 370	ENVIRONMENTAL PSYCHOLOGY I	
PSY 375	FORENSIC PSYCHOLOGY	
PSY 376	HEALTH PSYCHOLOGY	
PSY 379	PSYCHOLOGY OF MONEY	
PSY 381	PSYCHOLOGY OF CULTURE	
PSY 383	THE PSYCHOLOGY OF HUMAN SEXUAL BEHAVIOR	
PSY 387	PSYCHOLOGY OF GENDER	
PSY 388	PSYCHOLOGY OF DEATH AND DYING	

Social/Persona	ılity Psychology		
Select one of the following by advisement:		3	
PSY 311	PERSONALITY: THEORY AND RESEARCH		
PSY 325	SOCIAL BEHAVIOR		
Developmenta	l Psychology		
Select one of t	he following by advisement:	3	
PSY 301	PERSPECTIVES ON CHILD ABUSE AND ADVOCACY		
PSY 355	LIFESPAN DEVELOPMENTAL PSYCHOLOGY		
PSY 356	CHILD DEVELOPMENT		
PSY 357	ADOLESCENT AND YOUNG ADULT DEVELOPMENT		
Advanced Elec	tives		
PSY 310	BEHAVIOR MODIFICATION	3	
TWO 400 LEVE	EL PSY ELECTIVES @ 3 CREDITS EACH	6	
Combined Pathway Applied Behavior Analysis (ABA) Graduate Courses			
Students must complete each of the following EXE courses during senior year of Psychological Science BS			
EXE 522	BEHAVIORAL ASSESSMENT, INSTRUCTION AND INTERVENTION		
EXE 544	BEHAVIORAL INTERVENTIONS FOR STUDENTS WITH CHALLENGING BEHAVIORS		
EXE 634	APPLIED BEHAVIOR ANALYSIS ⁴		
EXE 681	CLINICAL RECORDS AND ETHICAL PRACTICES FOR BEHAVIORAL ANALYSIS		
All College Elec	ctives	33	
Total Credit Ho	purs	120	
Applied Beha	Applied Behavior Analysis MS Requirements (33 credit Hours)		
Prerequisite: Graduate standing is required for each of the following			
EXE 522	BEHAVIORAL ASSESSMENT, INSTRUCTION AND INTERVENTION	3	
EXE 544	BEHAVIORAL INTERVENTIONS FOR STUDENTS WITH CHALLENGING BEHAVIORS	3	
EXE 634	APPLIED BEHAVIOR ANALYSIS ⁴	3	
EXE 681	CLINICAL RECORDS AND ETHICAL PRACTICES FOR BEHAVIORAL ANALYSIS	3	

EXE 644	ADVANCED APPLIED BEHAVIOR ANALYSIS ⁵	3
EXE 645	EFFECTIVE PRACTICES FOR SUPPORTING INDIVIDUALS WITH AUTISM SPECTRUM DISORDER	3
EXE 646	CULTURE, DIVERSITY, DISABILITY, AND EDUCATION	3
EXE 673	PERSONNEL SUPERVISION AND MANAGEMENT ⁶	3
EXE 683	SUPERVISED PRACTICUM: PERSONNEL SUPERVISION AND MANAGEMENT ⁷	3
EXE 684	PRACTICE-BASED RESEARCH IN EXCEPTIONAL EDUCATION ⁸	3
EXE 690	MASTER'S PROJECT IN EXCEPTIONAL EDUCATION	3
Total Combined Graduate Credit Hours		33

¹ Prerequisite: At least sophomore status; Completion of the Mathematics and Quantitative Reasoning General Education requirement – only a MAT course at MAT 114 or higher.

- ⁵ Prerequisite: EXE 634.
- ⁶ Prerequisite: EXE 644.
- ⁷ Prerequisite: EXE 673.

Students will:

- 1. Critically evaluate existing literature in a given topic area of psychology.
- 2. Generate a scientific hypothesis in a given area of psychology.
- 3. Demonstrate understanding of basic research designs used in psychology and related mental health fields,
- 4. Utilize appropriate statistical techniques for a given research design.
- 5. Apply valid conclusions based on topic area, hypothesis, review of literature, and study outcomes.

Public Administration in Public and Nonprofit Management (M.P.A.)

Master of Public Administration

Program Code: MPA-AS Major Code: PNM

Political Science, Public Administration and Planning

Cassety Hall 202 (716) 878-6116

politicalscience.buffalostate.edu/

This program prepares individuals for positions of leadership and management in public and nonprofit organizations. The program provides students with an advanced course of graduate study concentrating on the conceptual, technical, and professional education and skills required for administrative and leadership positions in governmental offices and nonprofit organizations. The program blends three essential components of training to prepare graduates for a career in the public or nonprofit sector:

- 1. In-depth knowledge of the public and nonprofit sectors.
- 2. Professional or craft knowledge in the administration of government and nonprofit organizations.
- 3. Exposure of students to the world of practice by means of an MPA project (PAD 690).

Admission Requirements

² Prerequisite: PSY 350 with a grade of B- or higher.

³ Prerequisite: PSY 101 Grade of C and 3 additional hours of psychology.

⁴ Prerequisite: EXE 500 or EXE 100 or instructor permission

⁸ Prerequisite: Completion of all core courses except the research requirement and a minimum of 9 hours of coursework from the specialized program.

- 1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.00 (4.0 scale), or a master's degree from an accredited institution with a minimum cumulative GPA of 3.0 (4.0 scale).
 - Applicants who hold a bachelor's degree, but do not meet either of the above criteria may be considered for admission upon a successful interview with the academic intake coordinator or if they attain a minimum quantitative and verbal score of 152 on the Graduate Record Exam (GRE) or complete 6 credit hours of 500-level PAD courses (courses must be preapproved by the academic intake coordinator) at SUNY Buffalo State as an accepted MPA pre-major student with a minimum cumulative GPA of 3.5.
- 2. Two letters of reference on the MPA admission form that attest to the applicant's academic performance or potential. Please note that at least one reference must be from a college professor or instructor. Those individuals who graduated from college more than five years ago can ask colleagues, supervisors, and individuals with whom they work on community or nonprofit endeavors (boards, etc.) to write on their behalf. The public administration admissions committee particularly seeks answers to the following questions: a. how long, and in what capacity have you known the applicant? b. Does the applicant have any special talents, abilities, or attributes that deserve mention? c. Do you have any concerns about this applicant that would impede success in graduate studies?
- 3. A letter of intent should describe: why the applicant wishes to pursue the MPA; how the applicant's academic training and job experience, if applicable, are linked; why the applicant is prepared for study in the MPA program; a list of the applicant's educational objectives; background in statistics and/or methodology, if any; interest and future career goals; and, the choice of track (nonprofit or public administration) in which to concentrate. The letter of intent will be evaluated as a writing sample according to organization conventions of language and content. With respect to experience in statistics and research methods, the MPA Admission Committee has been receiving a number of queries regarding their statistics/research methods background. A wide variety of majors are represented in the MPA program, many from the arts and humanities without either coursework or job experience in either of these fields. We ask students to explain their experience in their letter of intent to assist us in tailoring our PAD 680 Research Methods in Public Administration to the incoming class in Fall . Please indicate in the Letter of Intent if you are applying to the 17-month Cohort MPA Program.
- 4. A resume.
- 5. Applicants for whom English is a second language must submit a score of the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) as documentation of English language proficiency. Applicants with a minimum TOEFL score of 550 or higher on the paper exam or 79 on the Internet exam, or with an IELTS score of 6.0 or higher will be considered for admission. Information on the TOEFL can be found at http://www.toefl.org. Information on the IELTS can be found at http://www.toefl.org.
 - English as a Second Language Program International students who do not meet the language requirement can be admitted to Buffalo State's Intensive English Language Institute (IELI); students must complete required coursework in English as a Second Language (ESL) program and take the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) as documentation of English language proficiency. The ESL program is a non-degree, non-credit bearing program designed to help students with varying levels of English proficiency through coursework, interaction with native speakers of English, and individualized language practice. Contact the department for more information.
- 6. In addition, all applicants should review the <u>Admission to a Graduate Program</u> section in the Graduate Catalog. SUNY BUFFALO STATE UNDERGRADUATES - PLEASE NOTE - students who have earned a GPA of 3.0 or above in Buffalo State's Public Administration and Nonprofit Minor are guaranteed admission into the MPA program. Students satisfying this requirement must: 1) fill out the Graduate Studies Application, 2) pay the application fee, and 3) follow instructions for official transcripts. Reference letters and the letter of intent are waived. PLEASE NOTE IF A BUFFALO STATE STUDENT IS ADMITTED TO THE 4 + 1 PROGRAM, the application fee is waived.

Program Requirements

Required Courses (21 credit hours)		
PAD 500	PUBLIC ADMINISTRATION AND POLICY	3

PAD 601 PUBLIC BUDGETING 3

PAD 640	HUMAN RESOURCE MANAGEMENT FOR PUBLIC AND NONPROFIT ORGANIZATIONS	3
PAD 646	STRATEGIC PLANNING FOR PUBLIC AND NONPROFIT ORGANIZATIONS	3
PAD 680	RESEARCH METHODS IN PUBLIC ADMINISTRATION	3
PAD 681	DATA ANALYSIS AND PRESENTATION	3
PAD 735	PUBLIC ORGANIZATIONS	3
Select one of the following	ng tracks:	12
Public Administration Tra	nck	
Nonprofit Management 1	Frack	
International Public Mana	agement Track	
Master's Project (3 credit	hours)	
PAD 690	MASTER'S PROJECT (by advisement)	3
Total Credit Hours		36
Public Administration Trac	k	
Required Course (3 credit	hours)	3
PAD/ECO 515 or PAD 607 or PAD 608	NYS GOVERNMENT AND BUDGET INTERGOVERNMENTAL RELATIONS CITY AND COUNTY MANAGEMENT	
Select three from the foll	owing:	9
PAD 501	COMPARATIVE PUBLIC ADMINISTRATION	
PAD 502	ADMINISTRATIVE LAW	
PAD 505	INTRODUCTION TO DISASTER AND EMERGENCY MANAGEMENT	
PAD 540	U.S. PUBLIC POLICY	
PAD 587	TOPICS COURSE (1-4)	
PAD 588	GRADUATE INTERNSHIP (1-6)	
PAD 590	INDEPENDENT STUDY (1-3)	
PAD 606	DISASTER RESPONSE AND RECOVERY MANAGEMENT	
PAD 609	DISASTER AND EMERGENCY MANAGEMENT PLANNING	

PAD 688	LEADERSHIP IN PUBLIC AND NONPROFIT ORGANIZATIONS	
PAD 700	IMMIGRATION AND REFUGEE POLICY	
PAD 701	ADMINISTRATIVE ETHICS	
PAD 704	HUMAN RIGHTS AND HUMANITARIAN POLICY	
PAD 712	MANAGING PROGRAM EVALUATION	
PAD 715	SURVEY METHODS AND DESIGN	
Total Credit Hours		9

Nonprofit Management Track

Required Course ('3 credit hours)
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megamea ecarec (e erea	,	
PAD 604	NONPROFIT MANAGEMENT AND GOVERNANCE	3
Select three from the fo	ollowing:	9
PAD/ECO 515	NYS GOVERNMENT AND BUDGET	
PAD 505	INTRODUCTION TO DISASTER AND EMERGENCY MANAGEMENT	
PAD 540	U.S. PUBLIC POLICY	
PAD 587	TOPICS COURSE (1-4)	
PAD 588	GRADUATE INTERNSHIP (1-6)	
PAD 590	INDEPENDENT STUDY (1-3)	
PAD 603	NGO MANAGEMENT & INTERNATIONAL DEVELOPMENT	
PAD 606	DISASTER RESPONSE AND RECOVERY MANAGEMENT	
PAD 609	DISASTER AND EMERGENCY MANAGEMENT PLANNING	
PAD 647	THE NONPROFIT AND VOLUNTARY SECTOR	
PAD 648	NONPROFIT GRANTS MANAGEMENT AND FUND DEVELOPMENT	
PAD 688	LEADERSHIP IN PUBLIC AND NONPROFIT ORGANIZATIONS	
PAD 701	ADMINISTRATIVE ETHICS	
PAD 712	MANAGING PROGRAM EVALUATION	
PAD 715	SURVEY METHODS AND DESIGN	

International Public Mar	nagement Track	
Required Course:		
PAD 605	INTERNATIONAL PUBLIC MANAGEMENT AND SERVICE	3
Track Electives - Select	three courses from the following list (9 Credit Hours)	9
PAD 501	COMPARATIVE PUBLIC ADMINISTRATION	
PAD 505	INTRODUCTION TO DISASTER AND EMERGENCY MANAGEMENT	
PAD 587	TOPICS COURSE (1-4)	
PAD 588	GRADUATE INTERNSHIP (1-6)	
PAD 590	INDEPENDENT STUDY (1-3)	
PAD 603	NGO MANAGEMENT & INTERNATIONAL DEVELOPMENT	
PAD 606	DISASTER RESPONSE AND RECOVERY MANAGEMENT	
PAD 609	DISASTER AND EMERGENCY MANAGEMENT PLANNING	
PAD 700	IMMIGRATION AND REFUGEE POLICY	
PAD 704	HUMAN RIGHTS AND HUMANITARIAN POLICY	
PAD 712	MANAGING PROGRAM EVALUATION	
PAD 715	SURVEY METHODS AND DESIGN	
Total Credit Hours		12

12

Students will:

Total Credit Hours

- 1. Lead and manage in public governance
- 2. Participate in and contribute to the policy process
- 3. Analyze, synthesize, think critically, solve problems and make decision
- 4. Articulate and apply a public service perspective
- 5. Communicate and interact productively with a diverse and changing workforce and citizenry

Public Relations (M.S.)

Master of Science Program Program Code: MS-AS Major Code: PBR

Communication Department Buckham Hall B120 (716) 878-3606 communication.buffalostate.edu/ The Communication Department's online Master of Science degree in Public Relations, a part-time degree program (six credits per semester), provides a solid foundation in the principles and practice of public relations for students interested in careers in public relations. It educates students in the principles, theories, research methods and writing techniques that are needed for a career in public relations, with special emphasis on strategic communication planning skills and ethical standards that are required to succeed in public relations. The 33-credit program includes seven required public relations courses, two public relations electives, and two general electives.

Admission Requirements

- 1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of at least 2.75 on a 4.0 scale.
- 2. Three writing samples.
- 3. A 500-word letter of intent describing educational objectives and career goals.
- 4. Three letters of recommendation that attest to the applicant's potential as a graduate student.
- 5. In addition, international applicants from non-English speaking countries must take the Test of English as a Foreign Language (TOEFL) with a score of 100 or higher. Because this degree program is writing-intensive, reflecting the nature of public relations jobs, students with a TOEFL score below 100 are likely to have difficulty completing the program.

Application Deadline: The application deadline is rolling for summer, spring, J-term, and fall semesters.

Required Courses (21 credit hours)		
COM 610	PUBLIC RELATIONS PRINCIPLES AND PRACTICES	3
COM 621	THEORIES OF PUBLIC RELATIONS	3
COM 631	ADVANCED PUBLIC RELATIONS WRITING	3
COM 635	INTERNSHIP IN PUBLIC RELATIONS	3
COM 641	RESEARCH METHODS IN PUBLIC RELATIONS	3
COM 650	PUBLIC RELATIONS MANAGEMENT	3
COM 690	MASTER'S PROJECT	3
Public Relations Electives (6 credit hours)		
Two Communication courses by advisement such as: 6		6
COM 547	DATA ANALYTICS FOR STRATEGIC COMMUNICATION	
COM 587	SPECIAL TOPICS	
COM 590	INDEPENDENT STUDY	
COM 612	CRISIS COMMUNICATION	
COM 616	SOCIAL MEDIA STRATEGIES	
COM 660	GLOBAL PUBLIC RELATIONS	
COM 687	TOPICS COURSE	

General Electives (6 credit hours)	
Two courses from other areas, by advisement	6
Total Credit Hours	33

Students will:

- 1. understand and apply First Amendment principles and the law appropriate to professional practice relevant to the major
- 2. demonstrate an understanding of the history and role of professionals and institutions in shaping communication relevant to the major
- 3. demonstrate an understanding of gender and gender identity, race, ethnicity, class, sexual orientation, and, as appropriate, other forms of diversity, equity, and inclusion in domestic and global societies and their significance in the major
- 4. understand concepts and apply theories in the use and presentation of images and information relevant to the major
- 5. demonstrate an understanding of professional ethical principles and work ethically in pursuit of truth, accuracy, fairness and diversity
- 6. think critically, creatively and independently
- 7. conduct research and evaluate information by methods appropriate to the communication professions in which they work
- 8. write correctly and clearly in forms and styles appropriate for the communication professions, audiences and purposes they serve
- 9. critically evaluate their own work and that of others for accuracy, fairness, clarity, creativity, effective storytelling and/or professional style as appropriate to the major
- 10. apply basic numerical and statistical concepts appropriate to the major
- 11. apply tools and technologies appropriate to the major
- 12. demonstrate competence in professional speaking and presentational skills appropriate to the major
- 13. Contribute to knowledge appropriate to the communications professions in which they work.

Science Education (M.S.Ed.)

Master of Science in Science Education Program
Program Code: MSED-ED
Major Code: SBI (Leading to Initial NYS Teacher Certification in Biology 7-12)
SCH (Leading to Initial NYS Teacher Certification in Chemistry 7-12)
SEA (Leading to Initial NYS Teacher Certification in Earth Science 7-12)
SPH (Leading to Initial NYS Teacher Certification in Physics 7-12)

Career, Technical, and Science Education Department Bacon Hall 122 (716) 878-4717 ctse.buffalostate.edu/

Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in all other states</u>

This Master of Science in Science Education program is designed for individuals holding an undergraduate degree in a core science (Biology, Chemistry, Earth Sciences, Geology, or Physics). Candidates who complete 31-37 credit hours (which includes student teaching and a master's project) in education coursework may quality for NYSED initial certification allowing them to teach science in grades 7-12 in New York State.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

Admission Requirements

Candidates new to Buffalo State College

- 1. Applicants must have a baccalaureate degree with sufficient academic background in the prospective area of teaching to take graduate work in the discipline. Candidates are strongly encouraged to contact the department's program coordinator for a transcript review and a pre-application interview.
- 2. The following criteria must also be met:
 - Official transcripts from all institutions that the candidate has attended.
 - Overall GPA 3.0 or higher.
 - Proficiency in a foreign language through the 102 level (one year of foreign language).
 - Science certification area (Biology, Chemistry, Earth Sciences, Geology or Physics) GPA of 3.0 or higher.
 - A minimum of thirty credit hours in the science discipline (Biology, Chemistry, Earth Sciences, Geology, or Physics) in which certification is sought.
- 3. Statement of intent that should include:
 - reasons for pursuing graduate study in science education;
 - career aspirations;
 - special interests within the field;
 - any unusual features of background that might need explanation or be of interest to the program's admissions committee
- 4. Letter of reference that includes an assessment of the applicant's ability to work with others.

Buffalo State Quick Admit

For candidates with undergraduate degrees from SUNY Buffalo State, Science Education has agreements with the content science departments to "Buffalo State Fast Track" their majors wishing to become certified to teach. Students in the following degree programs at SUNY Buffalo State who meet the above admission requirements can move directly into the M.S.Ed. program with this Buffalo State Fast Track option:

- B.A. Biology
- B.S. Chemistry
- B.A. Geology; B.S. Earth Sciences
- B.A. Physics; B.S. Physics

Official transcripts are not required for candidates on Buffalo State Fast Track.

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

Required Courses (31-37 credit hours)			
Professional Education and Science Education (15-21 credit hours)			
SED 502	SECONDARY SCIENCE EDUCATION TEACHING: THEORY, CONTENT AND PEDAGOGY	3	
SED 545	LITERACY FOR TEACHING SCIENCE	3	
SED 650	CURRICULAR RESEARCH TOPICS IN SCIENCE	3	
SED 664	TEACHING SCIENCE WITH TECHNOLOGY	3	
EXE 500	INDIVIDUALS WITH SPECIAL NEEDS	3	
SPF 503	EDUCATIONAL PSYCHOLOGY	3	
EDU 609	RESEARCH AND PRACTICE IN ADOLESCENT LITERACY	3	
Practica (13 credit i	hours)		

SED 678	INITIAL HIGH SCHOOL SCIENCE TEACHING EXPERIENCE	6
SED 679	SEMINAR IN SCIENCE EDUCATION	1
Culminating Project (3 credit hours)		
SED 690	MASTER'S PROJECT	3
Total Credit Hours		31-37

Residency

Program Overview

The SUNY Buffalo State graduate residency program provides a residency track option for qualified candidates who are selected by the faculty from their demonstrated competence in the first year of their Master's degree programs. In first year, course sequences are parallel for both non-resident track and resident track candidates to allow faculty and candidates to assess their suitability for the full residency track experience in year two. Rather than the standard 150 hours of field experiences and 100 hours of student teaching located in courses throughout the currently registered programs, residents enjoy 1000 hours of experience in graduated difficulty from field-based co-teaching focused on practicing specific pedagogies to full "teacher of record" responsibilities in the final months of their full year residency experience. The value of this model is in allowing resident applicants to be paid for working full time in schools while they complete their required coursework. The coursework remaining for the residency year complements their work with Mentor teachers and is accomplished in tandem with their classroom experiences.

Admission Requirements

Candidates who wish to pursue the residency option toward a recommendation for certification must be recommended by program faculty either upon first application to the program or during the first year of the curriculum prior to the residency year.

Preparatory Semester: Courses taken or undergraduate equivalents verified		3-9
SPF 500	MULTICULTURAL EDUCATION (Equivalent Undergraduate Acceptable)	0-3
SPF 503	EDUCATIONAL PSYCHOLOGY (Equivalent Undergraduate Acceptable)	0-3
or SPF 529	ADOLESCENT PSYCHOLOGY	
EDU 620	TEACHING AND LEARNING IN DIVERSE CLASSROOMS	3
Required Courses (9 credi	t hours)	9
EDU 609	RESEARCH AND PRACTICE IN ADOLESCENT LITERACY	3
SED 545	LITERACY FOR TEACHING SCIENCE	3
SED 650	CURRICULAR RESEARCH TOPICS IN SCIENCE	3
Residency Year (22 credit hours) ¹		22
SED 502	SECONDARY SCIENCE EDUCATION TEACHING: THEORY, CONTENT AND PEDAGOGY	3
SED 664	TEACHING SCIENCE WITH TECHNOLOGY	3
SED 677	INITIAL MIDDLE SCHOOL SCIENCE TEACHING EXPERIENCE	6

SED 678	INITIAL HIGH SCHOOL SCIENCE TEACHING EXPERIENCE	6
SED 679	SEMINAR IN SCIENCE EDUCATION	1
SED 690	MASTER'S PROJECT	3

¹ Courses in both residency and non-residency programs are equivalent until final residency year when Methods of Teaching courses (SED 502, 664 and 690), are grouped into Semester I and Semester II of the Residency Year. Hours of practice in Semester I courses are increased to meet 500 hour requirement as are the 500 hours in the pratica, "teaching experience" courses, 677, 678). Catalog descriptions of all included courses and catalog modifications are shown in MOU Appendix D. Courses in Residency are designated with an "R" and additional requirements specified.

Social Studies Education (7-12; M.S.Ed.)

Master of Science in Education Program Program Code: MSED-AS

Major Code: SSS

History and Social Studies Education Department Cassety Hall 302 (716) 878-5412 <u>history.buffalostate.edu/</u>

Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in</u> all other states

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).

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.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

Graduation Requirements (One of the following) Successful completion of a master's thesis (SSE 795) A comprehensive examination Defense of a graduate portfolio.

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. 36 credit hours in history and/or the social sciences.
- 3. Initial Certificate in Social Studies 7-12.
- 4. In addition, all applicants should review the Admission to a Graduate Program section in this catalog.

Program Requirements

At least 15 credit hours must be from 600-or 700-level courses.

At least 15 credit flour	s must be morn ood-or 700-level courses.	
Required Courses (1	5 credit hours) ¹	
History and/or socia	al science courses; 9 more credit hours must be concentrated in a single discipline.	15
Professional Educati	ion Courses (15 credit hours)	
SSE 502	TEACHING SOCIAL STUDIES ²	3
SSE 513	SEMINAR IN SECONDARY SOCIAL STUDIES	3
SSE 655	SOCIAL STUDIES LABORATORY ²	3
SSE 689	RESEARCH METHODS AND TECHNIQUES IN SECONDARY SOCIAL STUDIES	3
SSE Elective	Social Studies Education Elective	3
Master's Thesis, Por	tfolio Defense, or Comprehensive Examination (0-6 credit hours)	
Select one from the	following:	0-6
SSE 795	MASTER'S THESIS (1-6)	
Defense of Graduate	e Portfolio	
Comprehensive Exa	mination	
Total Credit Hours		30-36

¹ Selected under advisement.

Student Learning Outcomes

- 1. The Learner and Learning Candidates will use understanding of adolescent development, individual differences and diverse cultures to ensure inclusive, student-centered learning environments that enable each learner to meet high standards.
- 2. The Content Candidates will demonstrate understanding of central concepts, tools of inquiry, and structures of disciplines to be taught and be able to connect concepts to engage learners in critical thinking, creativity and collaborative problem solving related to authentic issues.
- 3. The Teachers will use multiple methods of assessment, plan instruction that supports every student in meeting rigorous learning goals and use varied an innovative instructional strategy to encourage learners to develop deep understanding of content.
- 4. The Profession and Professional Dispositions Candidates will engage in ongoing professional learning, use evidence to reflect on their own practice, seek appropriate leadership roles and collaborate with families, colleagues, and the community to advance the profession.

² Must be taken concurrently with one History content course.

Special Education: Childhood Program (XCE)

Master of Science in Education Program:

Program Code: MSED-ED

Major Code: XCE

Exceptional Education Department Ketchum Hall 204 (716) 878-3038 exceptionaleducation.buffalostate.edu/

Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in all other states</u>

The special education programs lead to a master of science in education degree and eligibility for New York State certification in special education. The teaching bilingual exceptional individuals program leads to eligibility for a New York State Bilingual Education Extension. The early childhood and childhood special education graduate programs are designed for students with undergraduate majors in early childhood, childhood or special education.

The Exceptional Education Department offers three specialty master of science in education degree programs in special education: early childhood (B-2), childhood (1-6), and generalist (7-12) secondary. 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. Students in a generalist (7-12) secondary program may require additional New York State content core and/or specific subject area coursework. Required preliminary courses are listed under each program area below. All three 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. The Exceptional Education Department also offers a Special Education Bilingual Certificate Program. Successful completion of this program leads to recommendation for New York State certification extension in bilingual education. Students are able to complete this certificate program concurrently with one of the special education masters of science in education programs offered by the department.

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. Each 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.

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 must reapply for admission as majors by submitting a change of major form to the Graduate Studies Office during or after the completion of two EXE courses. Premajors are not guaranteed admission to the program. At the point of admission to the major, candidates must have a 3.0 GPA and a grade of B or higher in each of the courses completed as a premajor.

About the Childhood Program

This program prepares teachers to work with students with disabilities at the elementary level. The program is intended to develop highly qualified teachers who possess the knowledge and skills to develop and facilitate effective instruction and programs. 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.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

Admission Requirements

- 1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale). Admission is competitive; not all qualified applicants are admitted.
- 2. Certification or eligible for certification in early childhood special education, childhood special education, or generalist (7-12) special education. Applicants with certification or eligible for certification in early childhood education, childhood education, or secondary education must meet additional special education certification requirements once enrolled. For generalist (7-12) secondary program only, applicants without any teaching certifications will be considered. Applicants for the generalist (7-12) secondary program must meet additional special education certification requirements as well as New York State content core and subject area requirements once enrolled.
- 3. A written statement describing the applicant's philosophy of education and relevant experiences in the field that are applicable to the graduate course of study. This statement must adhere to standard written English.
- 4. Faculty review.
- 5. Completion of a special application (included in the online application).
- 6. The ability to speak English and Spanish, and complete an oral interview (for Special Education: Bilingual Certificate 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.

Preliminary Courses (0-18 credit hours)			
Required for students without provisional/initial certification in childhood special education			
EXE 500	INDIVIDUALS WITH SPECIAL NEEDS	3	
EXE 501	EDUCATIONAL ASSESSMENT TECHNIQUES FOR SPECIAL EDUCATION	3	
EXE 502	MANAGING CLASSROOM ENVIRONMENT AND POSITIVE BEHAVIOR SUPPORTS	3	
EXE 503	INSTRUCTIONAL STRATEGIES FOR STUDENTS WITH DISABILITIES	3	
EXE 504	GRADUATE PRACTICUM IN SPECIAL EDUCATION	6	
Required Courses (24	l-27 credit hours)		
EXE 520	TEACHING OF INDIVIDUALS WITH SEVERE/MULTIPLE DISABILITIES AND AUTISM SPECTRUM DISORDERS	3	
or EXE 620	ADVANCED TEACHING OF INDIVIDUALS WITH SEVERE/MULTIPLE DISABILITIES AN AUTISM SPECTRUM DISORDERS	ND	
EXE 628	COLLABORATION AND CONSULTATIVE PRACTICES IN INCLUSIVE SETTINGS	3	
EXE 631	ADAPTING LANGUAGE ARTS AND READING INSTRUCTION FOR STUDENTS WITH MILD DISABILITIES	3	

EXE 632	DIRECT INSTRUCTION INTERVENTION MODELS FOR STUDENTS WITH SPECIAL NEEDS	3
EXE 633	ADAPTING CONTENT AREA INSTRUCTION FOR CHILDREN AND ADOLESCENTS WITH DISABILITIES	3
EXE 634	APPLIED BEHAVIOR ANALYSIS	3
EXE 636	PROMOTING EFFECTIVE SOCIAL INTERACTIONS IN THE SCHOOLS	3
EXE 682	INSTRUCTIONAL FIELD EXPERIENCE IN SPECIAL EDUCATION ¹	3-9
EXE 684	PRACTICE-BASED RESEARCH IN EXCEPTIONAL EDUCATION	3
Elective Courses (0-3 cred	dit hours) ²	2
Select up to one from the	e following:	3
EXE 530	PARENT AND FAMILY INVOLVEMENT IN SPECIAL EDUCATION PROGRAMS	
EXE 534	UNDERSTANDING STUDENTS WITH BEHAVIOR PROBLEMS IN THE CLASSROOM	
EXE 544	BEHAVIORAL INTERVENTIONS FOR STUDENTS WITH CHALLENGING BEHAVIORS	
EXE 627	TRANSITION FROM SCHOOL TO ADULT COMMUNITY LIFE	
EXE 644	ADVANCED APPLIED BEHAVIOR ANALYSIS	
EXE 650	ASSESSMENT OF YOUNG CHILDREN WITH DISABILITIES	
EXE 652	INTERVENTION IN EARLY CHILDHOOD SPECIAL EDUCATION	
Master's Project or Maste	er's Thesis (3-6 credit hours)	
EXE 690	MASTER'S PROJECT IN EXCEPTIONAL EDUCATION	3-6
or EXE 695	MASTER'S THESIS	
Total Credit Hours		30-54

 $^{^{\, 1} \,}$ EXE 682 is for students in the Childhood Program who do not complete EXE 504 .

Special Education: Early Childhood Program (EXC)

Master of Science in Education Program:

Program Code: MSED-EP

Major Code: EXC

Exceptional Education Department Ketchum Hall 204 (716) 878-3038 exceptionaleducation.buffalostate.edu/

² Selected under advisement.

Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in all other states</u>

The special education programs lead to a master of science in education degree and eligibility for New York State certification in special education. The teaching bilingual exceptional individuals program leads to eligibility for a New York State Bilingual Education Extension. The early childhood and childhood special education graduate programs are designed for students with undergraduate majors in early childhood, childhood, or special education.

The Exceptional Education Department offers three specialty master of science in education degree programs in special education: early childhood (B-2), childhood (1-6), and generalist (7-12) secondary. Students who are not provisionally/initially certified in special education must complete up to 18 credit hours of preliminary coursework in addition to the program area requirements. Students in a generalist (7-12) secondary program may require additional New York State content core and/or specific subject area coursework. Required preliminary courses are listed under each program area below. All three 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. The Exceptional Education Department also offers a Special Education Bilingual Certificate Program. Successful completion of this program leads to recommendation for New York State certification extension in bilingual education. Students are able to complete this certificate program concurrently with one of the special education masters of science in education programs offered by the department.

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. Each 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.

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 must reapply for admission as majors by submitting a change of major form to the Graduate Studies Office during or after the completion of two EXE courses. Premajors are not guaranteed admission to the program. At the point of admission to the major, candidates must have a 3.0 GPA and a grade of B or higher in each of the courses completed as a premajor.

About the Early Childhood Program

This program prepares early interventionists and teachers to work with infants and young children with disabilities—or young children at risk for being identified with a disability—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 disorders.

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.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

Admission Requirements

- 1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale). Admission is competitive; not all qualified applicants are admitted.
- 2. Certification or eligible for certification in early childhood special education, childhood special education, or generalist (7-12) special education. Applicants with certification or eligible for certification in early childhood education, childhood education, or secondary education must meet additional special education certification requirements once enrolled. For generalist (7-12) secondary program only, applicants without any teaching certifications will be considered. Applicants for the generalist (7-12) secondary program must meet additional special education certification requirements as well as New York State content core and subject area requirements once enrolled.
- 3. A written statement describing the applicant's philosophy of education and relevant experiences in the field that are applicable to the graduate course of study. This statement must adhere to standard written English.
- 4. Faculty review.
- 5. Completion of a special application (included in the online application).
- 6. The ability to speak English and Spanish, and complete an oral interview (for Special Education: Bilingual Certificate 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 .

Preliminary Courses (0-15 credit hours)		0-15
Required for students without provisional/initial certification in early childhood special education		
EXE 500	INDIVIDUALS WITH SPECIAL NEEDS	
EXE 501	EDUCATIONAL ASSESSMENT TECHNIQUES FOR SPECIAL EDUCATION	
EXE 502	MANAGING CLASSROOM ENVIRONMENT AND POSITIVE BEHAVIOR SUPPORTS	
EXE 504	GRADUATE PRACTICUM IN SPECIAL EDUCATION (6)	
Required Courses (24 cred	lit hours)	
EXE 510	COGNITION AND EMERGENT LITERACY IN YOUNG CHILDREN WITH DISABILITIES	3
EXE 612	MANAGING THE BEHAVIOR OF YOUNG CHILDREN WITH DISABILITIES	3
EXE 520	TEACHING OF INDIVIDUALS WITH SEVERE/MULTIPLE DISABILITIES AND AUTISM SPECTRUM DISORDERS	3
or EXE 620	ADVANCED TEACHING OF INDIVIDUALS WITH SEVERE/MULTIPLE DISABILITIES AND A SPECTRUM DISORDERS	UTISM
EXE 628	COLLABORATION AND CONSULTATIVE PRACTICES IN INCLUSIVE SETTINGS	3
EXE 650	ASSESSMENT OF YOUNG CHILDREN WITH DISABILITIES	3
EXE 652	INTERVENTION IN EARLY CHILDHOOD SPECIAL EDUCATION	3
EXE 682	INSTRUCTIONAL FIELD EXPERIENCE IN SPECIAL EDUCATION	3

EXE 684	PRACTICE-BASED RESEARCH IN EXCEPTIONAL EDUCATION ¹	3
Elective Courses (0-6 c	Elective Courses (0-6 credit hours) ²	
Select up to two from	the following.	3
EXE 530	PARENT AND FAMILY INVOLVEMENT IN SPECIAL EDUCATION PROGRAMS	
EXE 534	UNDERSTANDING STUDENTS WITH BEHAVIOR PROBLEMS IN THE CLASSROOM	
EXE 544	BEHAVIORAL INTERVENTIONS FOR STUDENTS WITH CHALLENGING BEHAVIORS	
EXE 631	ADAPTING LANGUAGE ARTS AND READING INSTRUCTION FOR STUDENTS WITH MILD DISABILITIES	
EXE 632	DIRECT INSTRUCTION INTERVENTION MODELS FOR STUDENTS WITH SPECIAL NEEDS	
Master's Project or Ma	ster's Thesis (3-6 credit hours)	
EXE 690	MASTER'S PROJECT IN EXCEPTIONAL EDUCATION	3-6
or EXE 695	MASTER'S THESIS	
Total Credit Hours		30-54

¹ Admission to EXE 684 is by special permission. An application is completed the semester prior to admission. See the department office for application deadlines.

Special Education: Students with Disabilities (All Grades) and 7-12 Students with Disabilities Subject Area Extensions (EXM)

Master of Science in Education Program:

Program Code: MSED-EP Major Code: EXM

Exceptional Education Department

Ketchum Hall 204 (716) 878-3038

exceptionaleducation.buffalostate.edu/

Accredited: Council for the Accreditation of Educator Preparation (CAEP)

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in all other states</u>.

This Special Education master's program is designed for educators who have completed an undergraduate teacher education program in another area and want to expand their expertise and gain certification in special education; graduates will be prepared to meet the diverse needs of P-12 students with disabilities. Completion leads to recommendation for NYS certification in Students with Disabilities: All Grades (PreK-12), with optional subject area extensions for Grades 7-12 in Earth Science, Biology, Chemistry, Physics,

² Selected under advisement.

Social Studies, Mathematics, English Language Arts, Spanish, French, Italian, German, Greek, Hebrew, Japanese, Latin, Mandarin, and

About the SWD (All Grades) Program

This program prepares teachers to work with students with disabilities across the P-12 grades. The program is intended to develop highly qualified and high caliber teachers who possess the knowledge and skills to help students with disabilities maximize their potential and reach ambitious outcomes.

The goal of this program is to prepare special educators who work collaboratively with fellow educators, to provide evidence-based teaching strategies to promote student learning, and to design positive environments that foster learning for students both with and without disabilities.

Real Learning in Real Schools

Students in this graduate special education program gain hands-on experience through fieldwork in real school settings. Practice-based learning is woven throughout the curriculum, including immersive opportunities such as classroom simulations, field practica, and cutting-edge mixed-reality teaching experiences. This applied approach ensures graduates are not only knowledgeable but confident and classroom-ready from day one.

Applied Research

The culminating experience of our graduate programs is a two-course final sequence (EXE 684/690) taken across their final two semesters that guides students through the completion of a master's project rooted in real-world educational challenges. In this capstone experience, students identify a problem of practice, develop and conduct a small-scale study, and present their findings—bridging research and practice in meaningful ways. This powerful process empowers future educators to become reflective problem-solvers who use data-driven insights to inform and improve their teaching.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/

Admission Requirements

- 1. Awarded a bachelor's degree in education from an accredited college or university.
- 2. Earned a minimum cumulative GPA of 3.0 (4.0 scale).
- 3. Completed a New York State registered teacher preparation program prior to enrollment and have completed NYS requirements for certification eligibility with pending or issued Initial and/or Professional certification, OR hold National Board certification, OR have at least one year of effective teaching under a valid New York State or out-of-state teaching license or certificate.
- 4. Completed three credit hour college-level courses in the following areas with grades of C or higher at the undergraduate level and B or higher at the graduate level: (a) introduction to the nature and needs of students with disabilities (e.g., EXE 100 or course equivalent) and (b) managing classroom environment and positive behavior supports for students with disabilities (e.g., EXE 362 or course equivalent). For applicants who have not completed these requirements in their prior course work, they will be required to take or will be required to complete EXE 500 and/or EXE 502, respectively, or course equivalents.
- 5. Completed six credit hours in literacy instruction related to teaching literacy skills, including for students with disabilities and English Language Learners, with a grade of C or higher at the undergraduate level or B or higher at the graduate level. Those who have not met this requirement will be required to take EXE 521.
- 6. Provide a written statement describing the applicant's philosophy of education and relevant experiences in the field, as applicable.
- 7. Completion of online application.

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

Preliminary Courses (6-12 credit hours)		
EXE 500	INDIVIDUALS WITH SPECIAL NEEDS ¹	0-3
EXE 501	EDUCATIONAL ASSESSMENT TECHNIQUES FOR SPECIAL EDUCATION	3

EXE 502	MANAGING CLASSROOM ENVIRONMENT AND POSITIVE BEHAVIOR SUPPORTS ¹	0-3	
EXE 503	INSTRUCTIONAL STRATEGIES FOR STUDENTS WITH DISABILITIES	3	
Required Cou	rses (24-30 credit hours)		
EXE 511	WRITING IEPS ACROSS THE P-12 GRADE SPAN	3	
EXE 521	FOUNDATIONS OF LITERACY FOR STUDENTS WITH DISABILITIES (PART I) ¹	0-3	
EXE 619	ADVANCED LITERACY FOR STUDENTS WITH DISABILITIES (PART II)	3	
EXE 623	ASSESSMENT AND INSTRUCTION IN MATH FOR STUDENTS WITH DISABILITIES	3	
EXE 638	COLLABORATION AND SOCIAL SKILLS	3	
EXE 659	ADAPTING CURRICULUM AND INSTRUCTION TO MEET THE NEEDS OF STUDENTS WITH DISABILITIES	3	
EXE 679	PRACTICUM—SPECIAL EDUCATION ALL GRADES	3	
EXE 684	PRACTICE-BASED RESEARCH IN EXCEPTIONAL EDUCATION	3	
Master's Proj	Master's Project or Master's Thesis (3-6 credit hours)		
EXE 690	MASTER'S PROJECT IN EXCEPTIONAL EDUCATION	3-6	
or EXE 695	MASTER'S THESIS		
Total Credit H	Total Credit Hours 30-42		

¹ These courses are only required for those who did not meet the entrance admission criteria.

Subject Area Extension Requirements (30-54 credit hours)

Candidates pursuing a subject area extension complete a minimum of 12 semester hours in the chosen subject area. Advisorapproved courses from previous undergraduate and graduate studies may be used to fulfill some or all of a subject area's extension requirements. The 7-12 subject area extensions for this program are: Earth Science, Biology, Chemistry, Physics, Social Studies, Mathematics, English Language Arts, Spanish, French, Italian, German, Greek, Hebrew, Japanese, Latin, Mandarin, and Urdu.

Special Education: Students with Disabilities (All Grades) Initial Teaching Certification and Students with Disabilities Subject Area Extensions (EXI)

Master of Science in Education Programs:

Program Code: MSED-EP

Major Code: EXI

Exceptional Education Department Ketchum Hall 204 (716) 878-3038

exceptionaleducation.buffalostate.edu/

Accredited: Council for the Accreditation of Educator Preparation (CAEP)

² Admission to EXE 684 is by special permission. An application is completed the semester prior to taking the course. See the department office for application deadlines.

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in</u> all other states

This Special Education master's program is tailored for individuals who did not complete an undergraduate degree in education. The program prepares educators to support diverse student needs in Grades P-12. Completion leads to a recommendation for NYS certification in Students with Disabilities: All Grades (PreK-12), with optional subject area extensions for Grades 5-9 and 7-12 in Earth Science, Biology, Chemistry, Physics, Social Studies, Mathematics, English Language Arts, Spanish, French, Italian, German, Greek, Hebrew, Japanese, Latin, Mandarin, and Urdu.

About the Students with Disabilities Programs

This program prepares individuals who are new to the teaching profession to work with students with disabilities across the P-12 grades. The program is intended to develop highly qualified and high caliber teachers who possess the knowledge and skills to help students with disabilities maximize their potential and reach ambitious outcomes.

The goal of this program is to prepare special educators who work collaboratively with fellow educators to provide evidence-based teaching strategies to promote student learning and to design positive environments that foster learning for students with and without disabilities. Graduates of this program become knowledgeable in subject matter content and acquire a solid foundation in the technology of teaching, with knowledge related to direct and interactive instruction (cooperative learning, peer tutoring, differentiated instruction, and responsive instructional strategies).

Real Learning in Real Schools

Students in this graduate special education program gain hands-on experience through fieldwork in real school settings. Practice-based learning is woven throughout the curriculum, including immersive opportunities such as classroom simulations, field practica, and cutting-edge mixed-reality teaching experiences. This applied approach ensures graduates are not only knowledgeable but confident and classroom-ready from day one.

Applied Research

The culminating experience of this graduate program is EXE 691, a two-course final sequence that guides students through the completion of a master's project rooted in real-world educational challenges. To demonstrate special education pedagogical and content knowledge, candidates design and execute student-centered, evidence-based interventions based on professional literature. They implement, interpret results, and make data-driven decisions in applied settings, aiming to impact academic, behavioral, functional, or social outcomes. This powerful process empowers future educators to become reflective problem-solvers who use data-driven insights to inform and improve their teaching.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

Admission Requirements

- 1. Awarded a bachelor's degree from an accredited college or university with an academic major in an area other than teacher preparation.
- 2. Earned a minimum cumulative GPA of 3.0 (4.0 scale).
- 3. Completed six credit hours of college-level work (with minimum course grades of C for undergraduate level courses and minimum course grades of B for graduate level courses) 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 the four disciplines.
- 4. Completed three credit hour college-level course in the introduction to the nature and needs of students with disabilities (e.g., EXE 100 or course equivalent) with a minimum grade of C for undergraduate course work and a minimum grade of B for graduate level coursework. Each applicant will have completed this requirement as an undergraduate or will be required to complete EXE 500 or course equivalent.
- 5. Provide a written statement describing the applicant's personal philosophy of education and relevant experiences in the field, as applicable.
- 6. Completion of online application.

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

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Preliminar	y Courses (12-15 credit hours)	
EXE 500	INDIVIDUALS WITH SPECIAL NEEDS ¹	0-3
EXE 501	EDUCATIONAL ASSESSMENT TECHNIQUES FOR SPECIAL EDUCATION	3
EXE 502	MANAGING CLASSROOM ENVIRONMENT AND POSITIVE BEHAVIOR SUPPORTS	3
EXE 503	INSTRUCTIONAL STRATEGIES FOR STUDENTS WITH DISABILITIES	3
EXE 579	FIELD EXPERIENCE IN SPECIAL EDUCATION	3
Required (Courses (33 credit hours)	
EXE 511	WRITING IEPS ACROSS THE P-12 GRADE SPAN	3
EXE 521	FOUNDATIONS OF LITERACY FOR STUDENTS WITH DISABILITIES (PART I)	3
EXE 619	ADVANCED LITERACY FOR STUDENTS WITH DISABILITIES (PART II)	3
EXE 623	ASSESSMENT AND INSTRUCTION IN MATH FOR STUDENTS WITH DISABILITIES	3
EXE 659	ADAPTING CURRICULUM AND INSTRUCTION TO MEET THE NEEDS OF STUDENTS WITH DISABILITIES	3
EXE 638	COLLABORATION AND SOCIAL SKILLS	3
EXE 581	PRACTICUM IN EARLY CHILDHOOD/CHILDHOOD SPECIAL EDUCATION	6
EXE 582	PRACTICUM IN INTERMEDIATE/HIGH SCHOOL SPECIAL EDUCATION	6
Master's P	Project (3 credit hours)	
EXE 691	APPLIED MASTER'S PROJECT IN SPECIAL EDUCATION ²	3
Content C	ore Requirements (0-24 credit hours) ³	
Must have	six semester hours in each subject area:	
Math		0-6
English lar	nguage arts (ELA)	0-6
Social Stud	dies	0-6
Science		0-6
Total Cred	it Hours	45-72

¹ This course is only required for those who did not meet this entrance admission criterion.

² Admission to EXE 691 is by special permission and will be taken during the semester of student teaching. An application is completed the semester prior to admission. See the department office for application deadlines.

³ These courses are only required for those who did not meet this admission criterion. Some or all Content Core Requirements may be met through prior undergraduate or graduate courses by transcript analysis.

Candidates in a subject area extension program must complete a minimum of 12 semester hours in the chosen subject area. Advisorapproved courses from previous undergraduate and graduate studies may be used to fulfill some or all of a subject area's extension requirements. The 5-9 and 7-12 subject area extensions to program are: Earth Science, Biology, Chemistry, Physics, Social Studies, Mathematics, English Language Arts, Spanish, French, Italian, German, Greek, Hebrew, Japanese, Latin, Mandarin, and Urdu.

Speech-Language Pathology (M.S.Ed.)

Master of Science in Education Program Program Code: MSED-SP

Major Code: SLP

Speech-Language Pathology Department Caudell 316 (716) 878-4412 speech.buffalostate.edu/

Accredited by: The Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) of the American Speech-Language-Hearing Association and The Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in all other states</u>

Programs must be planned under advisement and approved by the graduate program director. 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 New York State teacher certification. Students must successfully complete 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 communicate with the graduate program director 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 master's in education (M.S. Ed.) program is a full-time program that is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology

(CAA), aspx?site=ashacms&webcode=caalisting&caacat=all, of the American Speech-Language-Hearing Association, 2200 Research Boulevard #310, Rockville, Maryland 20850, 800-498-2071 or 301-296-5700. The program is currently accredited through 2031. It is listed as Buffalo State University.

The master's in education (M.S. Ed.) degree program in speech-language pathology is also registered with the New York State Education Department (nysed.gov/contact-NYSED). Students must complete all requirements for New York State licensure in speech-language pathology (open.nysed.gov/prof/slpa) and for the initial/professional teaching certificate issued by the New York State Department of Education (Teacher of Speech and Language Disabilities) (teachercertification.buffalostate.edu).

Admission Requirements

- 1. Applicants with a bachelor's degree in Speech-Language Pathology (SLP) or Communicative Sciences and Disorders (CSD) from an accredited college or university must have a minimum overall GPA of 3.0 (4.0 scale) and a minimum major GPA of 3.0 (4.0 scale). Applicants with an overall GPA between 2.75 and 3.0 may be considered for admission if their major SLP/CSD GPA is 3.4 or higher.
- 2. Applicants with an undergraduate degree in a different discipline may apply directly to the master's program. In this situation, the student will be required to complete prerequisite undergraduate courses prior to beginning graduate coursework and clinical practica. The specific courses that will be needed will be determined by the graduate program director, once the student has been admitted to the program. Applicants must have a minimum overall GPA of 3.0 (4.0 scale).

- 3. Applicants with bachelor's degrees who have completed additional certification programs (CDA/SLPA), Communication Disorders post-baccalaureate coursework, or additional degrees, consisting of 18 credit hours or more, may be considered for admission.
- 4. Applicants with an overall undergraduate GPA of 3.0 may be considered for admission if their additional certification/coursework GPA is 3.4 or higher.
- 5. For ASHA Certification and New York State Teacher Certification, the following courses listed below are also required. If these courses were not completed at the undergraduate level, students will need to complete them during their graduate program: 3 credits in a biological science, 3 credits in chemistry or physics, 3 credits in statistics, 3 credits in the social and behavioral sciences, SLP 401 Aural Rehabilitation SPF 202 Child Development and Education, SPF 503 Educational Psychology, EXE 500 Individuals with Special Needs, SLP 424 Speech-Language Pathology Programs in Schools.

Application Procedures

The Speech-Language Pathology Department currently participates in the Communication and Sciences Centralized Application Service (CSDCAS). Applicants must apply online using the CSDCAS application.

All applicants should review the <u>Admission to a Graduate Program</u> section in this catalog and the SLP How to Apply page: https://speech.buffalostate.edu/how-apply-0

Application Deadline

Applicants must apply by January 15 for fall admission. No applications are accepted for summer or spring admission. CSDCAS applications must be verified by the application deadline. Applications can only be verified once all payments and transcripts have been received. To ensure your application is verified on time, it is recommended that you complete your application at least two weeks before the deadline.

Two 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, both letters must come from faculty in the major who teach a graded course. For students from other majors, both letters must come from faculty who teach a graded course in their specific major. A writing sample. You may be contacted for a personal interview and/or asked to upload a short video statement.

Required Courses (38 credit hours) ¹		
SLP 501	CLINICAL METHODS	2
SLP 511	NEURAL PROCESSES OF COMMUNICATION	3
SLP 516	DIAGNOSTIC PRINCIPLES AND PROCEDURES	2
SLP 518	EXTENDED APPLICATIONS IN COMMUNICATION SCIENCES AND DISORDERS	1
SLP 541	LANGUAGE DISORDERS: BIRTH TO AGE 5	3
SLP 580	RESEARCH METHODS IN SPEECH-LANGUAGE PATHOLOGY	2
SLP 605	CONTEMPORARY ISSUES IN CLINICAL INTERACTIONS: FAMILIES AND CULTURE	2
SLP 606	FLUENCY DISORDERS	3
SLP 607	DYSPHAGIA ACROSS THE LIFE SPAN	2
SLP 608	NEUROMOTOR SPEECH DISORDERS ACROSS THE LIFE SPAN	3
SLP 609	DISORDERS OF VOICE AND RESONANCE	3
SLP 610	EVALUATION AND TREATMENT OF PHONOLOGICAL DISORDERS	3

SLP 621	AUGMENTATIVE AND ALTERNATIVE COMMUNICATION	3
SLP 622	LANGUAGE DISORDERS OF SCHOOL-AGED INDIVIDUALS	3
SLP 623	ACQUIRED LANGUAGE DISORDERS	3
Practicum (19 cre	dit hours) ¹	
SLP 505	GRADUATE PRACTICUM IN AN EDUCATIONAL SETTING	6
SLP 515	CLINICAL PRACTICUM	7
SLP 611	EXTERNSHIP IN COMMUNICATION DISORDERS	3-12
Required Capston	e Options: ¹	
SLP 690	MASTER'S PROJECT	3
or SLP 625	ADVANCED TOPICS AND ISSUES IN COMMUNICATION SCIENCES AND DISORDERS	
Or		
SLP 695	MASTER'S THESIS	3-6
Total Credit Hours		60

¹ Selected under advisement.

Students will:

- 1. Demonstrate knowledge of the biological, neurological, acoustic, psychological, developmental, and linguistic and cultural bases of basic human communication and swallowing processes.
- 2. Demonstrate knowledge of etiologies, characteristics, and linguistic and cultural correlates of communication and swallowing disorders.
- 3. Demonstrate the ability to integrate information pertaining to normal and abnormal human development across the life span.
- 4. Conduct selected screening, prevention and formal and informal evaluation procedures.
- 5. Interpret, integrate and synthesize all information to arrive at a diagnosis and conveys said information cogently in written format.

Technology Education (M.S.Ed.)

Master of Science in Education Program Program Code: MSED-EP

Major Code: TED

Career, Technical, and Science Education Department Bacon Hall 122 (716) 878-4717 ctse.buffalostate.edu/

Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for <u>certification requirements in all other states</u>

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.

Candidates should consult the Teacher Certification website for current seminars and workshops. https://teachercertification.buffalostate.edu/seminars-and-workshops

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 3.0 (4.0 scale).
- 2. Acceptance by the program coordinator.
- 3. Initial Certificate in Technology Education.

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

Required Courses (12 credit hours)			
BME 605	EVALUATION IN BUSINESS AND MARKETING EDUCATION	3	
CTE/BME 602	ADMINISTRATION OF VOCATIONAL EDUCATION	3	
SPF 689	METHODS AND TECHNIQUES OF EDUCATIONAL RESEARCH	3	
or BME 601	RESEARCH SEMINAR		
TED/CTE 600	FOUNDATIONS IN TECHNOLOGY EDUCATION	3	
Elective Courses (12-15 cr	redit hours) ¹		
CTE 536	CONTEMPORARY METHODOLOGY		
CTE 550	ORGANIZATION OF DIVERSIFIED COOPERATIVE WORK-STUDY PROGRAMS		
CTE 555	OPERATION OF DIVERSIFIED COOPERATIVE WORK-STUDY PROGRAMS		
CTE 603	SELECT TOPICS IN THE ORGANIZATION AND ADMINISTRATION/SUPERVISION OF VOCATIONAL EDUCATION		
CTE 604	TECHNICAL PROJECT		
CTE 605	OCCUPATIONAL GUIDANCE FOR CAREER EXPLORATION		
CTE 606	HISTORY AND PHILOSOPHY OF OCCUPATIONAL EDUCATION		
SPF 503	EDUCATIONAL PSYCHOLOGY		

TED 521	OCCUPATIONAL AND PRACTICAL ARTS EDUCATION FOR STUDENTS WITH SPECIAL NEEDS	
TED 701	SEMINAR IN TECHNOLOGY EDUCATION: WRITING AND PUBLISHING	
TED 703	SEMINAR IN THE DEVELOPMENT OF INSTRUCTIONAL MATERIALS	
TED 705	CAREER EXPLORATION IN TECHNOLOGY FOR THE MIDDLE SCHOOL	
12-15 credit hours		12-15
Master's Project or M	aster's Thesis (3-6 credit hours) ¹	
TED 690	MASTER'S PROJECT	3-6
or TED 695	MASTER'S THESIS	
Total Credit Hours		30

¹ Selected under advisement.