Master of Fine Arts

The Program
The objective of the Master of Fine Arts degree is to prepare individuals for careers in Ceramic Art, Electronic Integrated Arts or Sculpture/Dimensional Studies (with concentration in glass art or sculpture).

This two-year program is highly competitive; only eight Ceramic Art, five Electronic Integrated Arts, and five Sculpture/Dimensional Studies students are admitted annually. Each accepted M.F.A. candidate is given full tuition funding and a financial stipend, either as a teaching assistant or as an intern, within the Art and Design program.

In addition to studio courses, all graduate students take credits in a series of seminars, art history, studio electives and technical courses relevant to their area of study.

In the second year, students write a thesis and present a M.F.A. thesis exhibition in the School of Art and Design’s Fosdick-Nelson Gallery, Robert C. Turner Gallery or an approved alternate site.

Application
Applicants for admission should hold the baccalaureate degree with the equivalent of sixty credit hours in studio courses. A portfolio of completed works could be considered the equivalent of some studio courses.

In addition to the transcripts and letters of recommendation required of all students, applicants to the MFA program must present a portfolio showing competency in the appropriate areas. All applicants must conform to the current area specifications as listed on the following link http://alfred.edu/admissions/apply/grad-art-portfolio.cfm

The School of Art and Design of the New York State College of Ceramics at Alfred University offers graduate study in three divisional areas: Ceramic Art, Electronic Integrated Arts and Sculpture/Dimensional Studies (concentration in either glass art or sculpture). Applicants should make clear to which M.F.A. program they are applying.

All applications are made through the Graduate Admissions Office and all supporting documents and the portfolio must be submitted to the Graduate Admissions Office by January 15th of the application year. Only completed applications will be forwarded to the Faculty Review Committee. It is important to clearly indicate which program you want to enter, as documentation and portfolios are only reviewed by the faculty in the specific program indicated on the application form.

No applications for January enrollment are considered.

Accepted Applicants must make a $200 deposit and return a signed contract as directed in the notification of acceptance or their acceptance becomes void.

Financial Support
In addition to a grant for full tuition waiver for both years of residency in the program, each M.F.A. student is guaranteed an assistantship for every semester of the two-year program.
Degree Programs

Graduate assistantships consist of three types: a teaching assistantship, a teaching internship, and a facilities coordinator. In all cases, the student receives a stipend of $4,750 for the academic year.

Graduate teaching assistants help faculty members in the performance of their academic duties; a graduate teaching intern teaches one (four credit hour) studio course per semester; and a facilities coordinator works with the division head and technicians to organize and manage studio facilities. All assistants have a commitment of approximately 10 hours/week to meet the requirements of the stipend. Assignments are made in consultation among faculty, students and division chairs at the beginning of each semester.

Ceramic Art

Applicants to the Ceramic Art program must indicate a commitment to working with ceramic materials and processes. The Ceramic Art program embraces all aspects of ceramic art that pursue inquiries into utility, pottery, the vessel, sculpture, the figure, architectural application, the decorative, installation and performance.

The MFA program in Ceramic Art at Alfred University has a distinguished history as a premier institution for education in the arts. The program’s curriculum, facilities, and environment foster the pursuit of visual and verbal expression, technical innovation and intellectual access to personal growth. The graduate program in the Division of Ceramic Art is an intense studio-based experience that stresses the development of concepts through making; the faculty aim to provide the highest caliber of education for students whose talents and aspirations are primed to flourish. The launch of the student’s emergence into the professional art community is the thesis exhibition and articulated defense of the work’s premise.

Electronic Integrated Arts

The M.F.A. in Electronic Integrated Arts is an interdisciplinary approach to electronic and digital processes. It provides a context in which to explore the relationships between the languages, processes, and forms of emerging electronic/digital technologies with those of painting, printmaking, photography, design, video, and sonic art.

This program of interdisciplinary study is committed to permeating the shared boundaries between traditional and expanding technologies and is grounded in digital media. Students who complete this MFA program will be prepared to take their place in the world as practicing artists, educators, and leaders who are discovering new spheres of cultural discourse and making significant contributions in the field of emerging digital media practices.

Sculpture/Dimensional Studies

The Sculpture Dimensional Studies Division at Alfred University fosters progressive creative growth and stimulates innovative technical and conceptual development in each individual student. The diverse faculty aim to foster thoughtful exploration into a wide range of materials and processes that challenge and examine the ever expanding field of sculpture. Curricular breadth and depth is grounded in a tradition of material exploration where students also engage with historical and contemporary research thus priming students to succeed as active participants in the international art world. The M.F.A. program simultaneously prepares graduate students to be both practicing artists and teachers.
Degree Programs

Concentration in Glass Art
Applicants to the Glass Art program will have made a commitment to working with glass as a medium for artistic expression.

Concentration in Sculpture
Applicants to the Sculpture program will have made a commitment to the making of sculpture with or without media specificity.

Degree Requirements
Degree requirements include two years of residence and a minimum of sixty graduate credit hours. Reviews of work are scheduled at midterm and at the end of each semester.

First-Year Requirements – Ceramic Art
Advanced Ceramics (Fall and Spring) 16-20
Ceramic Materials I: Clay bodies and glazes (Fall) 2
Choice of at least one of the following technical courses: 2
(Spring 1st Yr or Fall 2nd Yr)
  Ceramic Materials II: Problem-solving for the ceramic artist
  (prerequisite: Ceramic Materials I: Clay bodies and glazes
  Kiln Procedures and Construction
  Intro to 3D Modeling and Rapid prototyping
  Methods for Digital Output
  (Prerequisite: Intro to 3D Modeling and Rapid prototyping)
Art History (Ceramic) (Fall) 4
Topics in Ceramic Art (Spring) 2
  First Year Graduate Seminar) (Fall) 2
  Studio Electives (Spring 1st Yr or Fall 2nd Yr) 0-4
  Ceramic Graduate Seminar 2

First-Year Requirements – Electronic Integrated Arts
Advanced Electronic Arts 16
Work and Analysis 8
Art History/Criticism 4
Electronic Strategies (non-time based) 4
Electronic Strategies (time based) 4
First Year Graduate Seminar 2
Electives 0-4

First-Year Requirements – Sculpture/Dimensional Studies
Concentration in Glass Art and Sculpture
Advanced Sculpture/Dimensional Studies 16-20
History of Art 4
Studio Practice 2
First Year Graduate Seminar 2
Electives 0-4

Overview of Required Courses
Ceramic Art
ART or ARTH 500 or higher level Electives* (outside major concentration) 4
  May include ART 501, 550, 500, 535, 587, 590, 601, or other graduate level
  courses approved by advisor.
ART 552 Advanced Ceramics* (credits per semester, 1st Year) 8-12
ART 582 Ceramic Materials I: Clay Bodies and Glazes 2
Choice of at least one of the following technical courses: 2
(Spring 1st Yr or Fall 2nd Yr)
Degree Programs

ART 583 Ceramic Materials II: Problem-solving for the ceramic artist
(Prerequisite: Ceramic Materials I: Clay bodies and glazes)
ART 581 Kiln Procedures and Construction
ART 587 Intro to 3D Modeling & Rapid Prototyping
ART 592 Advance Kiln Procedures and Construction
ART 590 Methods for Digital Output
(Prerequisite: Intro to 3D Modeling & Rapid Prototyping)
ART 560 Ceramics Graduate Seminar 2
ART 672 Written Thesis Preparation 4
ART 680 Thesis* (credits per semester, 2nd Year) 8-12
ARTH 500 level Ceramics History Seminar 4
ARTH 660 First Year Graduate Seminar 2
Minimum Total Credit Hours Required for the Program 60

Electronic Integrated Arts
ART or ARTH 500 or higher level Electives* (outside major concentration) 4
May include ART 501, 550, 500, 535, 587, 590, 601, or other graduate level courses approved by advisor.
ART 523 Work and Analysis 16
ART 524 Electronic Strategies (non-time based) 2
ART 525 Advanced Electronic Arts* 16-20
ART 526 Electronic Strategies (time based) 2
ART 671 Written Thesis Preparation-EIA 4
ART 681 Thesis* 16-20
ARTH 660 First Year Graduate Seminar 2
ARTH minimum one Art History/Criticism course 4
Minimum Total Credit Hours Required for the Program 60

Sculpture/Dimensional Studies

Concentration in Glass Art and Sculpture
ART or ARTH 500 or higher level Electives* (outside major concentration) 8
May include ART 501, 550, 500, 535, 587, 590, 601, or other graduate level courses approved by advisor.
ART 529 Studio Practice 6
ART 522 Advanced Sculpture/Dimensional Studies* (credits per semester, 1st Year) 8-12
ART 672 Written Thesis Preparation 4
ART 682 Thesis* (credits per semester, 2nd Year) 8-12
ARTH 561 Viewing Sculpture 4
ARTH 660 First Year Graduate Seminar 2
ARTH minimum one additional Art History/Criticism course 4
Minimum Total Credit Hours Required for the Program 60

*A materials fee, is charged for these courses
Master of Business Administration

The Alfred University MBA program focuses on critical thinking, teamwork, and decision making. Students are enrolled in either the general business administration MBA or a specialized accounting track. Our cohort model builds a sense of community among MBA students, and offers opportunities for close engagement with faculty and peers.

The curriculum has a special focus on enterprise resource planning (ERP). An ERP system (used by many Fortune 500 companies) is an integrated enterprise-wide software to operate business processes in an efficient manner. Simulations and computer applications are embedded across MBA courses, familiarizing students with the SAP enterprise resource planning software suites.

Mission Statement
The School of Business advances Alfred University's mission and goals in providing intellectual leadership through teaching, research and service. We provide active-learning driven educational programs in business management to interdisciplinary undergraduate and graduate students who value an intimate, interactive, student-centered learning environment. We develop our students into ethical business leaders who can think critically and communicate effectively in both domestic and global arenas. Our MBA program also highlights such in-demand skills and knowledge as creativity, innovation and sustainable business. Our faculty conducts discipline based, applied and instructional research that bridge the gap between business theory and practice.

In support of this mission, graduates of our MBA program will be able to:
- Demonstrate effective leadership and teamwork skills.
- Integrate their functional knowledge of business to make decisions in situations of uncertainty.
- Use a global perspective in business decision making.
- Understand and apply ethical practices in business decisions.

Business Administration Track
The MBA-Business Administration program emphasizes integration of business knowledge and applications to management strategies and decision-making. Graduates of the MBA program are prepared to enter management roles in a variety of business settings, with well-honed skills in data management software and decision-making systems.

The MBA curriculum has three components: foundation courses, graduate business core courses, and graduate electives. Foundation courses feature fundamentals of business knowledge that can be completed at the undergraduate level prior to starting the program, or as part of the program. Typically, students who have an undergraduate degree in business (or a similar field) have already completed most foundation requirements and may be able to complete the program (graduate core and electives) in as few as 30 credit hours.

Business Foundations
The foundation classes introduce the functional areas of business practice. These classes are satisfied through coursework completed through prior undergraduate study, or can be completed as the initial sequence of MBA program.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ACCT 211</td>
<td>Financial Accounting</td>
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<tr>
<td>ACCT 212</td>
<td>Managerial Accounting</td>
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<tr>
<td>BUSI 113</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 201</td>
<td>Principles of Microeconomics</td>
<td>4</td>
</tr>
</tbody>
</table>
Degree Programs

ECON 202 Principles of Macroeconomics 3
FIN 348 Managerial Finance 3
MGMT 328 Management and Organizational Behavior 3
MGMT 484 Operations Management 3
MKTG 221 Marketing Principles and Management 3

Total credit hours 28

Graduate Business Core

MBA 610 Leadership Dynamics 3
MBA 613 International Marketing 3
MBA 614 Corporate Finance 3
MBA 621 Business Decision Making 3
MBA 622 Quality Management 3
MBA 624 Strategic Management 3

Total credit hours 18

Graduate Electives

Elective courses align with current business practices and topics of special interest. Students take a minimum of four elective courses. Examples of recent elective options include: Economic Analysis, Innovation Management, Leadership Dynamics, Customer Relationship Management, eFinance and Online Investing, and Seminar in Critical Thinking and Problem Solving.

Minimum credit hours 12

Accounting Track

The MBA-Accounting track prepares those individuals with an undergraduate degree in accounting for various careers in the accounting field, including public accounting, corporate, and government positions. The program builds on the MBA foundation and core skills while offering advanced training in accounting topics and applied skills.

The MBA-Accounting program is registered with the NYS Department of Education as meeting the 150-credit hour educational requirements for Certified Public Accountant (CPA). Graduates of the MBA-Accounting program are prepared to enter professional roles in the public accounting, corporate, and government sectors.

The curriculum parallels the MBA-Business Administration track’s foundation courses and graduate business core courses, but requires three advanced accounting core courses, and one elective option. Students who graduate from the Alfred University School of Business with an accounting major will have completed the prerequisite undergraduate coursework permitting them to complete all MBA-Accounting requirements with 30 credit hours of graduate study. A review of transcripts will be required to determine the content/length of program for applicants who have completed a baccalaureate degree at institutions other than Alfred University.

Business Foundations

The foundation classes introduce the functional areas of business practice. These classes are satisfied through coursework completed through prior undergraduate study, or can be completed as the initial sequence of the MBA program.

ACCT 211 Financial Accounting 3
ACCT 212 Managerial Accounting 3
BUSI 113 Business Statistics 3
ECON 201 Introduction to Economics and Markets 4
ECON 202 Principles of Macroeconomics 3
Degree Programs

FIN 348  Managerial Finance     3
MGMT 328 Management and Organizational Behavior   3
MGMT 484 Operations Management     3
MKTG 221 Marketing Principles and Management   3
**Total credit hours**  28

In addition, students must have completed substantial undergraduate preparation in accounting. A review of transcripts is necessary to determine if preparation is complete. Additional undergraduate accounting courses may be required.

Graduate Business Core
MBA 610  Leadership Dynamics     3
MBA 613 International Marketing   3
MBA 614 Corporate Finance     3
MBA 621 Business Decision Making   3
MBA 622 Quality Management     3
MBA 624 Strategic Management   3
**Total credit hours**  18

Graduate Accounting Core
MBA 653 Accounting Theory     3
MBA 655 Advanced Topics in Auditing   3
MBA 657 Advanced Taxation     3
MBA Elective   3
**Total credit hours**  12

Graduate Electives
MBA-Accounting students take at least one elective course to pursue topics of special interest. Examples of recent elective options include: Economic Analysis, Innovation Management, Leadership Dynamics, Customer Relationship Management, eFinance and Online Investing, and Seminar in Critical Thinking and Problem Solving, Creativity and Innovative Thinking; Negotiation and Persuasion; Sustainable Business.

**Minimum credit hours**  3

Full and Part-Time Study
Students may attend the M.B.A. program on a part-time or full-time basis. The program is designed so that full-time students who have met foundations requirements can complete the 30 credits of graduate coursework in one academic year. Typical schedules for full-time students in both tracks are illustrated below. Full-time students whose program requires more than the 30 credit hours would require more time, depending on their specific situation.

**Fall Semester – Business Administration Track**
MBA 610  Leadership Dynamics     3
MBA 613 International Marketing   3
MBA 614 Corporate Finance     3
MBA elective   3
MBA elective   3

**Spring Semester – Business Administration Track**
MBA 621 Business Decision Making     3
MBA 622 Quality Management   3
MBA 624 Strategic Management     3
MBA elective   3
MBA elective   3
Fall Semester – Accounting Track
MBA 610 Leadership Dynamics 3
MBA 613 International Marketing 3
MBA 614 Corporate Finance 3
MBA 653 Accounting Theory 3
MBA elective 3

Spring Semester – Accounting Track
MBA 621 Business Decision Making 3
MBA 622 Quality Management 3
MBA 624 Strategic Management 3
MBA 655 Advanced Topics in Auditing 3
MBA 657 Advanced Taxation 3

Part-time students can finish a 30 credit-hour program in a minimum of four semesters. Classes are offered in the late afternoon and early evening, so that students can reasonably plan to take a maximum of six credit hours per semester. Some courses are offered online, which provides additional flexibility. Part-time students whose program of study requires more than 30 credit hours will need more time to complete the degree. Students may begin part-time study without formal application to the program, but can complete a maximum of 12 credit hours as a non-matriculated student.

GPA Requirements
The academic standards for graduate students at Alfred University require an overall cumulative average of 3.0 to meet graduation requirements. MBA students are permitted no more than 3 graduate credits below a grade of B. MBA-Accounting students must earn a grade of “B” or higher in each graduate course.

Admissions
Admission to the program for both part and full-time students requires the following:
1. Official undergraduate transcripts.
2. Two letters of recommendation from either employers or college professors, whichever is appropriate. Forms are available through the Office of Graduate Admissions, or on-line, for your convenience.
3. Personal statement of graduate educational objectives
4. Resume
5. Graduate Management Admissions Test. The GMAT is not required for MBA application. The GMAT may be required for applicants whose profile needs supplemental information to establish their readiness for graduate study in business.

6. Submit application and above items to:
   Office of Graduate Admissions
   Alumni Hall
   Saxon Drive
   Alfred, NY 14802
   (607) 871-2141
4+1 Pre-MBA Program
Students who complete the Business Administration minor at Alfred University will have fulfilled the undergraduate foundation requirements for the MBA. Those students who have earned a minimum GPA of 3.0 for courses in the Business Administration minor, and an overall GPA of 2.75 or greater, are not required to submit GMAT scores. Completion of the 4+1 undergraduate coursework does not guarantee admittance into the MBA program, as students must still apply and be accepted into the program.

Assistantships
Graduate assistantships are granted annually to full-time MBA students. Most graduate assistants work 7.5 hours per week with a graduate faculty member or professional staff member in their area of interest, and provide for remission of one-half the annual graduate tuition. Assistantship assignments may involve supporting faculty in teaching or research, working with college administrators on data analysis or student support functions, or assisting in the university’s business and finance office.

Assistantships are also available through the Division of Student Affairs, and may involve working with the residence life or athletics programs. These assistantship options required additional hours of service, and provide enhanced financial benefits. Athletics assistantships limit students to part-time enrollment.

Financial Aid
Financial aid is available. Students should contact the Financial Aid office at (607) 871-2159 for more information.

Facilities
The School of Business was established at Alfred University in 1973 and has been accredited by AACSB since 1987. The M.B.A. degree program is accredited by the Association to Advance Collegiate Schools of Business (AACSB) - International. The School is located in the F.W. Olin Building, a $5.6 million facility providing classroom computer facilities and a stock trading room. MBA students have access to a graduate lounge and computer workroom.

Career Services
The University Career Development Center (CDC) works closely with MBA students both during and after graduation to secure employment in their chosen field. The CDC provides individual career assistance such as resume and cover letter writing, electronic job searching, effective interviewing, salary negotiation and provides a medium to network with alumni.
Degree Programs

Counseling and School Psychology

The Division of Counseling and School Psychology offers graduate programs to prepare candidates to become mental health professionals working in schools, community agencies, and higher education. Three degree programs are available:

Master of Science in Education
- M.S.Ed. and Certificate of Advanced Study (MSED/CAS) in Counseling:
  - School & Mental Health Tracks
Master of Arts/Certificate of Advanced Study (MA/CAS) in School Psychology
Doctor of Psychology (Psy.D.) Degree in School Psychology

Counseling Program

Overview
The Graduate Program in Counseling is designed to train knowledgeable and skilled counselors who are able to serve a culturally diverse society through professional employment in school, agency, and higher education settings. The program is committed to the personal and professional development of each student in the context of a sound theoretical background. One-on-one interaction between faculty members and students encourages the personal learning that is vital to the education of counselors. Students gain a strong knowledge base and they also develop personal maturity and strong interpersonal and organizational skills.

Mission Statement
Alfred University’s graduate program in counseling prepares individuals for counseling positions in elementary, middle and high schools, mental health agencies, and colleges and universities. Students acquire core knowledge and clinical skills that enable them to enter the profession of counseling.

We (the faculty) strive to create a rigorous scholarly and supportive atmosphere for students to develop intellectually with a deep sense of social consciousness and self-awareness. We value teaching, scholarship, and service, which contribute to the mission of Alfred University.

Goals and Objectives of the M.S.Ed. Program in Counseling
Goal A: To prepare counseling students in the acquisition of a comprehensive and scholarly knowledge base relevant to the profession of counseling.
  Objective A: Students will demonstrate knowledge in each of the eight common core curricular areas:
  - Professional Orientation/Ethics
  - Social/Cultural Diversity
  - Human Development
  - Career Development
  - Helping Relationships
  - Group Work
  - Assessment Research/Program Evaluation

Goal B: To prepare counseling students in the acquisition of professional knowledge, clinical skills and abilities in the areas of individual, group, and family interventions.
  Objective B1: Mental health counseling students will demonstrate professional knowledge, skills, and practices necessary to address a wide variety of circumstances within the clinical mental health counseling context.
  Objective B2: School counseling students will demonstrate professional knowledge, skills, and practices necessary to promote the academic, career, and personal/social development of all K-12 students.
Goal C: To prepare counseling students to become competent, self-aware, and socially conscious in order to work in a variety of settings serving a diverse population.

Objective C: Students will engage in personal and professional growth experiences that will allow them to assess their academic progress, personal and professional development skills, self-understanding, interpersonal effectiveness, and commitment and readiness to enter the counseling field.

The Curriculum
The Mental Health Counseling track consists of 60 credit hours of coursework and supervised practicum/internship experiences leading to a Master of Science in Education and a Certificate of Advanced Study. Students gain applied experiences in the Child and Family Services Center on campus, as well as in various mental health agencies in the community. The mental health program is registered as a Licensure Qualified Program in New York State and satisfies all the educational requirements for students to become Licensed Mental Health Counselors (LMHC).

The School Counseling track consists of 60 credit hours of coursework and supervised practicum/internship experiences in schools leading to a Master of Science in Education and a Certificate of Advanced Study. Students specializing in school counseling will receive provisional certification as a New York State school counselor upon completion of the program, and have all coursework completed for permanent certification requirements.

The program admits students for the fall semester, and full-time students are continuously enrolled for two academic years. The degree can also be completed on a part-time basis. Satisfactory performance and development during the first two semesters as well as the satisfactory completion of a qualifying examination is a requirement for continuation in the program.

The course sequence for students in each of the tracks follows:

**School Counseling Track Course Sequence (Full-time)**

**First Year Courses**

**Fall Semester**
- COUN 602 The Professional and Ethical Foundations of Counseling 3
- COUN 606 Human Development: The Lifespan 3
- COUN 636 Principles of Counseling 3
- COUN 642 Multicultural Counseling 3
- COUN 671 Research and Statistics I 3

**Semester Total Credit Hours** 15

**Spring Semester**
- COUN 604 Foundations of School Counseling 3
- COUN 605 Career Development and Life Planning 3
- COUN 616 Mental Health, Exceptionality, and Disability 3
- COUN 638 Advanced Counseling Theory and Practice 3
- COUN 657 Practicum in Counseling I 3

**Semester Total Credit Hours** 15

**Second Year Courses**

**Fall Semester**
- COUN 626 Assessment in Counseling 3
- COUN 639 Group Counseling 3
- COUN 668 Internship in School Counseling I 6
- PSYC 641 Introduction to Family Therapy 3
- COUN 646 Consultation and Prevention 3
### Degree Programs

**Semester Total Credit Hours** 18

#### Spring Semester
- COUN 670 Internship in School Counseling II 6
- COUN 649 Evidence-Based Interventions in Schools 3
- COUN 695 Topics in Counseling 3

**Semester Total Credit Hours** 12

**Total Credit Hours Required for the Program:** 60

### Mental Health Track Course Sequence (Full-time)

#### First Year Courses

**Fall Semester**
- COUN 602 The Professional and Ethical Foundations of Counseling 3
- COUN 606 Human Development: The Lifespan 3
- COUN 636 Principles of Counseling 3
- COUN 642 Multicultural Counseling 3
- COUN 671 Research and Statistics I 3

**Semester Total Credit Hours** 15

**Spring Semester**
- COUN 603 Foundations of Mental Health Counseling 3
- COUN 605 Career Development and Life Planning 3
- COUN 615 Psychopathology and Differential Diagnosis 3
- COUN 638 Advanced Counseling Theory and Practice 3
- COUN 657 Practicum in Counseling I 3

**Semester Total Credit Hours** 15

### Second Year Courses

#### Fall Semester
- COUN 626 Assessment in Counseling 3
- COUN 639 Group Counseling 3
- COUN 641 Counseling Special Populations 3
- COUN 663 Internship in Mental Health Counseling I 6
- PSYC 641 Introduction to Family Therapy 3

**Semester Total Credit Hours** 18

#### Spring Semester
- COUN 628 Assessment in Mental Health Counseling 3
- COUN 664 Internship in Mental Health Counseling II 6
- COUN 695 Topics in Counseling 3

**Semester Total Credit Hours** 12

**Total Credit Hours Required for the Program:** 60

### School Counseling Track Course Sequence (Part-time)

#### First Year Courses

**Fall Semester**
- COUN 602 The Professional and Ethical Foundations of Counseling 3
- COUN 606 Human Development: The Lifespan 3
- COUN 636 Principles of Counseling 3

**Semester Total Credit Hours** 9
## Degree Programs

### First Year Courses

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Fall Semester</td>
<td>COUN 602</td>
<td>The Professional and Ethical Foundations of Counseling</td>
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<tr>
<td></td>
<td>COUN 606</td>
<td>Human Development: The Lifespan</td>
<td>3</td>
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<tr>
<td></td>
<td>COUN 636</td>
<td>Principles of Counseling</td>
<td>3</td>
</tr>
<tr>
<td>Spring Semester</td>
<td>COUN 605</td>
<td>Career Development and Life Planning</td>
<td>3</td>
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<tr>
<td></td>
<td>COUN 616</td>
<td>Mental Health, Exceptionality, and Disability</td>
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<tr>
<td></td>
<td>COUN 638</td>
<td>Advanced Counseling Theory and Practice</td>
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**Semester Total Credit Hours: 9**

### Second Year Courses

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<th>Semester</th>
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<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
<td>Fall Semester</td>
<td>COUN 642</td>
<td>Multicultural Counseling</td>
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<td>COUN 671</td>
<td>Research and Statistics I</td>
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<td></td>
<td>COUN 639</td>
<td>Group Counseling</td>
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<td>Spring Semester</td>
<td>COUN 657</td>
<td>Practicum in Counseling I</td>
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<td></td>
<td>COUN 604</td>
<td>Foundations of School Counseling</td>
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<td>COUN 695</td>
<td>Topics in Counseling</td>
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### Summer Courses (between year two and year three)

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<td>COUN 626</td>
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<td>PSYC 641</td>
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**Summer Total Credit Hours: 6**

### Third Year Courses

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<td>COUN 668</td>
<td>Internship in School Counseling I</td>
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<td></td>
<td>COUN 646</td>
<td>Consultation and Prevention</td>
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<tr>
<td>Spring Semester</td>
<td>COUN 670</td>
<td>Internship in School Counseling II</td>
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<td></td>
<td>COUN 649</td>
<td>Evidence-Based Interventions in Schools</td>
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<td><strong>Semester Total Credit Hours</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

**Total Credit Hours Required for the Program: 60**

### Mental Health Counseling Track Course Sequence (Part-time)

#### First Year Courses

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Semester</td>
<td>COUN 602</td>
<td>The Professional and Ethical Foundations of Counseling</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COUN 606</td>
<td>Human Development: The Lifespan</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COUN 636</td>
<td>Principles of Counseling</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Semester Total Credit Hours</strong></td>
<td><strong>9</strong></td>
</tr>
<tr>
<td>Spring Semester</td>
<td>COUN 605</td>
<td>Career Development and Life Planning</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COUN 615</td>
<td>Psychopathology and Differential Diagnosis</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COUN 638</td>
<td>Advanced Counseling Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Semester Total Credit Hours</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

#### Second Year Courses

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Semester</td>
<td>COUN 642</td>
<td>Multicultural Counseling</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COUN 671</td>
<td>Research and Statistics I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COUN 639</td>
<td>Group Counseling</td>
<td>3</td>
</tr>
</tbody>
</table>
Degree Programs

Semester Total Credit Hours

Spring Semester
COUN 657 Practicum in Counseling I 3
COUN 603 Foundations of Mental Health Counseling 3
COUN 695 Topics in Counseling 3
Semester Total Credit Hours 9

Summer Courses (between year two and year three)
COUN 626 Assessment in Counseling 3
PSYC 641 Introduction to Family Therapy 3
Summer Total Credit Hours 6

Third Year Courses

Fall Semester
COUN 663 Internship in Mental Health Counseling I 6
COUN 641 Counseling Special Populations 3
Semester Total Credit Hours 9

Spring Semester
COUN 664 Internship in Mental Health Counseling II 6
COUN 628 Assessment in Mental Health Counseling 3
Semester Total Credit Hours 9

Total Credit Hours Required for the Program: 60

Undergraduate Preparation for the M.S.Ed./C.A.S. Program in Counseling
It is preferred that students present evidence of successful completion of some undergraduate course work in the following subject areas:
Psychology, sociology, education, or human development. However, it is more important that students demonstrate academic success in their undergraduate work, no matter what the major.

Practical experiences are seen as valuable preparation, but cannot substitute for supervised graduate level practicum experiences. Up to 6 hours of graduate credit may be transferred to the master’s degree.

Counseling Program courses are open only to graduate students. Non-matriculated students who wish to take courses must obtain permission from the Division Chair. According to graduate school academic regulations, a maximum of 12 credits can be taken as a non-matriculated student.

Admission
Students applying to the Counseling Program must submit the following documents directly to the Graduate Admissions Office:
• a completed application form;
• three (3) letters of recommendation;
• official transcripts of all undergraduate and graduate coursework;
• Graduate Record Examination (GRE) results-General Test; and
• a personal statement of objectives;

Admission to the MS.Ed./C.A.S. Counseling Programs is limited to 18 students each year. Review of applications will begin on February 1. Early application is strongly encouraged.
Interview
An on-campus interview is expected of each applicant for admission to the program, but warranted exceptions may be made. Successful candidates will demonstrate adequate undergraduate preparation, as well as the maturity and self-awareness that are requisites skills for the profession of counseling. Correspondence about the program should be addressed to Dr. Kevin Curtin, Division of Counseling and School Psychology, Alfred University, Saxon Drive, Alfred, NY 14802. Telephone (607) 871-2212; e-mail: curtink@alfred.edu.

The M.A./C.A.S. Program in School Psychology

Overview
Alfred University offers a National Association of School Psychologists (NASP) approved program of graduate study in School Psychology consisting of two years of full-time graduate study followed by a full year internship. The Master’s degree is conferred following completion of 61 credit hours of coursework, and the Certificate of Advanced Study is awarded upon completion of the 18 credits of full-time internship. These degree requirements satisfy the academic portion of the New York State Education Department requirements for the provisional certificate as a school psychologist.

Graduates also fulfill the academic requirements for National Certification as a School Psychologist (NCSP), an additional credential offered by the National Association of School Psychologists. All students are required to take the School Psychology examination offered by the Educational Testing Service/Praxis Exam Series prior to completion of the internship.

The School Psychology Program is designed to develop professional psychologists who possess the personal characteristics and academic competencies necessary for serving the mental health and educational needs of all children and youth.

Because of the applied nature of the program and the close interpersonal relationships that the profession of school psychology demands, students applying for admission must demonstrate a high level of maturity, independence, and flexibility.

Mission of the MA/CAS Program
Preparation of school psychologists for applied professional practice in schools and related child and family settings.

Goals and Objectives of the MA/CAS Program
Goal A: To produce school psychologists with the personal qualities, interpersonal skills and awareness, and the ethical sensitivity predictive of success in a broad array of social, economic, and political contexts.

Objective A1: Students will develop an understanding of service delivery programs within a context respectful and appreciative of individual, family, and cultural diversity.

Objective A2: Students will develop an awareness that their personal characteristics and interpersonal skills affect the quality, social validity, and acceptability of the services they provide.

Objective A3: Students will abide by ethical standards as they relate to the historical foundations of the school psychology profession and the current guidelines for practice.

Goal B: To produce school psychologists competent to access a broad range of theoretical and practical approaches with sufficient depth to be effective, flexible practitioners.
Degree Programs

Objective B1: Students will develop proficiency in data-based decision-making, including traditional and alternative approaches to the assessment and evaluation of children’s academic, behavioral and emotional problems.

Objective B2: Students will develop proficiency in the design and development of programs to intervene both directly and indirectly with children’s academic, behavioral, and emotional problems. These programs will include academic strategies, behavior modification, crisis intervention, and counseling techniques that are implemented in a timely manner.

Goal C: To produce school psychologists who have an understanding of the basic principles of human cognitive and emotional development and their relationship to the functioning of children within a school setting.

Objective C1: Students will develop an understanding of the development of both normal and exceptional children.

Objective C2: Students will gain knowledge of general and special education services and legal guidelines, as part of understanding the educational and socio-political climate of their school districts.

Objective C3: Students will develop skills in consulting and communicating with school professionals and parents.

Objective C4: Students will develop skills in the prevention and remediation of academic and emotional problems in children.

Goal D: To produce school psychologists competent in the comprehension and application of research to professional practice.

Objective D1: Students will acquire a foundation in the scientific knowledge base of psychology and education, as well as an ability to evaluate and utilize research in their practice.

Objective D2: Students will develop proficiency in ongoing program evaluation, so they make informed decisions based upon objective data in developing services for children.

Objective D3: Students will develop a knowledge base which includes the updated and appropriate use of information technology in their practice.

Curriculum

The program of study emphasizes a base of training in school psychology with special concern for the application of psychological knowledge in a variety of settings.

Training in the following competency areas is provided: knowledge base in psychology and education; assessment; direct and indirect intervention; program development and evaluation; family systems; and professional role and functioning.

Students participate in supervised fieldwork experiences and practica from the first semester on. Students gain experience in local public schools as well as in the on-campus Child and Family Services Center. The culminating experience consists of a full-time, supervised yearlong internship in a school setting. Students are paid a stipend by the public school in which he/she interns, covering tuition for that year.

Satisfactory performance and skill development during the first two semesters, as well as success on a qualifying examination, are required for admission to the third semester of the program.

The following courses are required for all students in the M.A./C.A.S Program:

**First Semester**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PSYC 601</td>
<td>Foundations of Cultural Diversity</td>
<td>1</td>
</tr>
<tr>
<td>PSYC 603</td>
<td>Foundations of School Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 607</td>
<td>Learning and Cognition</td>
<td>3</td>
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<tr>
<td>Degree Programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
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<td></td>
</tr>
<tr>
<td>PSYC 626</td>
<td>Psychological and Educational Measurements</td>
<td>2</td>
</tr>
<tr>
<td>PSYC 627</td>
<td>Norm-Referenced Testing I</td>
<td>2</td>
</tr>
<tr>
<td>PSYC 636</td>
<td>Foundations of Interpersonal Effectiveness</td>
<td>3</td>
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<tr>
<td>PSYC 637</td>
<td>Introduction to Group Dynamics</td>
<td>1</td>
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<tr>
<td>PSYC 656</td>
<td>Field Experience in School Psychology I</td>
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<td><strong>Semester Total Credit Hours</strong></td>
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<td><strong>Second Semester</strong></td>
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<tr>
<td>PSYC 606</td>
<td>Advanced Developmental Psychology</td>
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<td>PSYC 629</td>
<td>Social-Emotional Assessment</td>
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</tr>
<tr>
<td>PSYC 632</td>
<td>Norm-Referenced Testing II</td>
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<tr>
<td>PSYC 638</td>
<td>Psychotherapy and Behavior Change</td>
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</tr>
<tr>
<td>PSYC 639</td>
<td>Exceptionality in Learning and Behavior</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 657</td>
<td>Field Experience in School Psychology II</td>
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<tr>
<td><strong>Semester Total Credit Hours</strong></td>
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<tr>
<td><strong>Third Semester</strong></td>
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<tr>
<td>PSYC 628</td>
<td>Academic Functioning</td>
<td>3</td>
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<td>PSYC 641</td>
<td>Introduction to Family Therapy</td>
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<tr>
<td>PSYC 646</td>
<td>Consultation and Prevention</td>
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<td>PSYC 658</td>
<td>Clinic Practicum I</td>
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<td>PSYC 671</td>
<td>Statistical Analysis and Research Design I</td>
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<td><strong>Semester Total Credit Hours</strong></td>
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<td><strong>Fourth Semester</strong></td>
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<td>PSYC 609</td>
<td>Physical Bases of Behavior</td>
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<tr>
<td>PSYC 642</td>
<td>Clinical Seminar: Advanced Topics in School Psychology</td>
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</tr>
<tr>
<td>PSYC 651</td>
<td>Academic Interventions</td>
<td>2</td>
</tr>
<tr>
<td>PSYC 664</td>
<td>Practicum in Academic Interventions</td>
<td>1</td>
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<tr>
<td>PSYC 659</td>
<td>Clinic Practicum II</td>
<td>3</td>
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<tr>
<td>PSYC 695</td>
<td>Professional Practice Seminar</td>
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<td><strong>Semester Total Credit Hours</strong></td>
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<tr>
<td><strong>Fifth Semester</strong></td>
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<tr>
<td>PSYC 667</td>
<td>Internship in School Psychology I</td>
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<tr>
<td><strong>Sixth Semester</strong></td>
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<tr>
<td>PSYC 668</td>
<td>Internship in School Psychology II</td>
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<tr>
<td><strong>Total Credit Hours Required for the Program</strong></td>
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**Undergraduate Preparation and Admission to the MA/CAS Program**  
(see below)

**The Doctor of Psychology Degree Program**

**Overview**

The Psy.D. Program in School Psychology is designed to prepare psychologists who will practice advanced skills in the schools and related child and family settings and to prepare graduates to meet professional employment demands for:

1. Psychologists in applied research;
2. Supervising psychologists;
3. Psychologists in child and family treatment agencies, hospitals, and private practice;
4. Professionals in higher education involved in the training of educators and clinicians.
Degree Programs

The program leads to New York State license eligibility as a psychologist as well as state and national certification as a school psychologist, an additional credential offered by the National Association of School Psychologists.

Doctoral training focuses on applied research skills, advanced studies, and expanded areas of expertise. Graduates will possess the flexibility to assume a variety of roles and have the necessary skills to aid in the continuous development through research and practice of more effective educational and psychological practices. They acquire a broad knowledge base in psychological and educational theory, research and practice. They develop competencies in basic skill areas, advanced assessment, direct and indirect intervention including counseling and consultation with individuals, groups and systems, applied research, and supervision of others providing psychological services to children and families, particularly within a rural context.

Doctoral candidates are also encouraged to develop a specific area of expertise through a concentration of coursework, field experience and research.

This focus on a strong professionally oriented program logically leads to the Psy.D. versus the Ph.D. degree and is in concert with the view put forth in the final report of the Psychology Committee of the Doctoral Evaluation Project of the New York State Education Department.

Mission of the Psy.D. Program
Preparation of psychologists for applied professional practice in schools and other child and family oriented settings.

Goals and Objectives of the Psy.D. Program

Goal A: To produce professional psychologists with the personal qualities, interpersonal skills and awareness, and the ethical sensitivity predictive of success in a broad array of social, economic, and political contexts.

Objective A1: Students will develop an understanding of service delivery programs within a context respectful and appreciative of individual and cultural diversity.

Objective A2: Students will demonstrate the personal characteristics and interpersonal skills that affect the quality, social validity, and acceptability of the services they provide.

Goal B: To produce professional psychologists competent to access a broad range of theoretical and practical approaches with sufficient depth to be effective, flexible practitioners.

Objective B1: Students will develop proficiency in traditional and emerging approaches to the assessment and evaluation of children’s academic, behavioral, and emotional problems.

Objective B2: Students will develop proficiency in the design and development of programs to intervene both directly and indirectly with children’s academic, behavioral, and emotional problems.

Goal C: To produce professional psychologists competent in the conduct, comprehension, and application of research to professional practice.

Objective C1: Students will acquire a foundation in the scientific knowledge base of psychology and education.

Objective C2: Students will develop proficiency in the conduct, dissemination, and application of research related to professional practice.
Curriculum
A total of 120 credit hours are needed to complete the program. A minimum of 90 credits of coursework beyond the baccalaureate degree must be completed, in addition to one year of internship (18 credits) and a minimum of 12 credits of dissertation.

As specified by University regulations, all work for the degree must be completed within 7 years from the date of the start of the program. Every student must fulfill a residency requirement, which requires the student to be registered for courses as a full-time student for two consecutive semesters. Thus, this is a four-year program at the minimum, with three years of coursework (including approximately 800 hours of supervised practica experiences), at least one year of full-time residency, and then a year-long full-time supervised internship. The content of the coursework is a balance of scientific bases, research experiences, and academic and professional applied psychology.

Nine credits of electives are required, and may be fulfilled by courses or advanced practicum experiences. All students must pass master’s level written comprehensive examinations, engage in a research apprenticeship, pass a doctoral qualifying examination and complete a written dissertation.

Sample Sequence of Courses for a Full-Time Student’s Program¹
The first four semesters are identical to the curriculum for the M.A./C.A.S. program, with the exception that doctoral students take PSYC 672- Statistical Analysis and Research Design II, during the fourth semester. Beyond the first two years doctoral students would enroll for the following:

**Years 1 and 2:**
- 61 credits from M.A. coursework
- PSYC 672 Statistical Analysis and Research Design II 3
- Elective 3

**Years 1 and 2 Total Credit Hours** 67

Beyond the first two years doctoral students enroll for the following:

**Year 3:**

*Fifth Semester*
- PSYC 673 Statistical Analysis and Research Design III 3
- PSYC 674 Research in School Psychology 3
- PSYC 692 Supervision and Administration of Psychological Services 3
- PSYC 699 Dissertation 3
- Electives 3

**Semester Total Credit Hours** 18

*Sixth Semester*
- PSYC 602 Seminar in Cultural Diversity 2
- PSYC 608 Social Psychology and Behavior 3
- PSYC 611 History and Systems of Psychology 3
- PSYC 699 Dissertation 3
- Electives 3

**Semester Total Credit Hours** 17

**Year 4:**

*Seventh Semester*
- PSYC 669 Pre-doctoral Internship I 9
Degree Programs

Eighth Semester
PSYC 670 Pre-doctoral Internship II

Minimum Total Credit Hours Required for the Program: 120

1This sample program the case of a student who completes the degree in four years as planned. Many students require additional time to complete their dissertation.

Undergraduate Preparation for the M.A./C.A.S., and Psy.D. Programs

The student must present evidence of competence in the following subject areas:
1. introduction to psychology;
2. statistical and/or experimental methods; and
3. at least one of the following:
   • developmental psychology (e.g., child and adolescent psychology);
   • personality; or
   • abnormal psychology.

Students who have not taken these courses, but who are acceptable candidates otherwise, may make arrangements upon approval of the School Psychology Committee, to satisfy these requirements via coursework or independent study in the summer preceding admission. Other courses, such as tests and measurements, learning or educational psychology are looked upon favorably. Practical experiences in psychology or education as well as any other relevant experiences are seen as valuable preparation.

Up to 6 graduate credits may be transferred to the master’s degree. Students who enter the doctoral program with prior graduate training relevant to the field of school psychology (including a prior master’s degree in school psychology) must complete ½ of their credits for doctoral coursework at Alfred University. This means that no more than 45 of the 90 credits of coursework can be transferred towards the doctoral degree.

Admission

Students applying to the School Psychology Program must submit the following documents directly to the Graduate Admissions Office:
• a completed application form;
• three (3) letters of recommendation;
• official transcripts of all undergraduate and graduate coursework;
• Graduate Record Examination (GRE) results-General Test;
• a personal statement of objectives; and
• a statement of research interest (Psy.D. only).

Admission to the M.A./C.A.S. School Psychology Program is limited to 18 students each year, and six students for the Psy.D. program. The deadline for applications to the Doctor of Psychology (Psy.D.) program in School Psychology is January 15. Review of applications for the M.A./C.A.S. program in School Psychology will begin on February 1. Late applications will be considered if places in the class still exist for qualified applicants. Early application is strongly encouraged.

Interview

An on-campus interview is expected of each applicant for admission to the program, but warranted exceptions may be made. Correspondence about the program should be addressed to Dr. Jana Atlas, Division of School Psychology, Alfred University, Saxon Drive, Alfred, NY 14802. Telephone (607) 871-2212; e-mail: atlasj@alfred.edu.
Degree Programs

Engineering and Science

There are six engineering and science programs leading to the conferral of the Master of Science degree:

- Biomaterials Engineering
- Ceramic Engineering
- Electrical Engineering
- Glass Science
- Materials Science and Engineering
- Mechanical Engineering

Biomaterials Engineering
Overview
Biomaterials Engineering (BME) at Alfred University is an interdisciplinary program that focuses on both the intrinsic properties of biomaterials and the interaction between these nonliving biomaterials and the biological systems with which they must interact. Tailored ceramics, glass, metals, composites, and polymers are assuming greater importance for implants, drug delivery substrates, radioactive delivery vehicles for cancer therapy, substrates for cell culture, catalysts for biological reactions, immobilizers of harmful molecular species, materials for batteries, capacitors and other implant devices.

The BME program at Alfred University seeks to educate a unique group of biomedical engineers whose focus is on materials and their interactions with cells and tissues. The program is designed to attract students from diverse backgrounds such as materials engineering, biotechnology, biomedical, and physical sciences who wish to study materials for medical applications.

The curriculum and thesis-based research focuses on: (a) an understanding of the interaction/interface between nonliving materials and biological systems via fabrication, characterization, and simulation; (b) the development of novel biomaterials, including biomimetic, bioreactive, and combination systems that utilize both living and nonliving components, (c) identification of new ways in which standard and novel biomaterials may be used in the analysis, diagnosis, and treatment of diseases and injuries; and (d) the development of standardized testing procedures for assessing and predicting materials behavior in the biological environment.

Students completing the program are well prepared to enter the rapidly growing “biotech” industries where knowledge of both materials and molecular cell biology is rare. They are also prepared to enter industries that develop and manufacture medical devices, equipment and supplies including the design and production of classic biomedical implants such as cardiovascular stents and dental prosthetics. They will be qualified for a wide range of careers in the healthcare industries. A significant fraction of students may continue their education in professional schools of medicine or law, or pursue Ph.D. studies in related fields such as Materials Science or Biomedical Engineering.

Prerequisites and Undergraduate Preparation
The program is open to students holding Bachelor of Science degrees in materials engineering, biological, and physical sciences. Acceptance into the program is based on the applicant’s prior academic record, work experience, potential for growth, and the availability of space in the program.
Degree Programs

Ideally, applicants should present evidence of undergraduate-level competence in the following subject areas: 1) introductory cell biology, 2) organic chemistry, 3) thermal and mechanical properties of materials, and 4) single-variable calculus. Applicants without the required background will also be considered for admission, but may have to take pre-requisite courses before enrolling specific graduate classes.

Curriculum

The Master of Science in BME requires a minimum of thirty semester-hours of graduate credit, of which at least twenty-four must be in advanced coursework. Candidates for the degree are required (1) to present and defend a written thesis of their research and (2) to submit a manuscript suitable for publication in a peer-reviewed journal. The curriculum is designed to be completed in two years of full-time study.

Course Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEMS 568</td>
<td>Biomedical Materials</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 569</td>
<td>Advanced Biomedical Materials Engineering</td>
<td>3</td>
</tr>
<tr>
<td>List A Technical Electives</td>
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</tr>
<tr>
<td>List B Technical Electives</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>CEMS 680</td>
<td>Graduate Thesis</td>
<td>6</td>
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<tr>
<td>ENGR 660</td>
<td>Research Seminar</td>
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<tr>
<td>ENGR 690</td>
<td>Graduate Seminar (mandatory each semester)</td>
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Total Credit Hours Required for the Program 30

List A Technical Electives (Materials)

<table>
<thead>
<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>CEMS 505</td>
<td>Defects and Defect-related Process</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 513</td>
<td>Nano-Structured Materials</td>
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</tr>
<tr>
<td>CEMS 526</td>
<td>Surface Properties of Glass</td>
<td>3</td>
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<td>CEMS 533</td>
<td>Statistical Experimental Design</td>
<td>3</td>
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<td>CEMS 534</td>
<td>Polymer Characterization</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 536</td>
<td>Physical and Mechanical Metallurgy</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 538</td>
<td>Surfaces and Interfaces</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 541</td>
<td>Advanced Crystallography</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 542</td>
<td>Advanced Optical Microscopy</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 543</td>
<td>Analytical Transmission Electron Microscopy</td>
<td>3</td>
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<tr>
<td>CEMS 567</td>
<td>Electrochemistry and Bioelectrochemistry</td>
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List B Technical Electives (Molecular and Cell Biology)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>CEMS 563</td>
<td>Advanced Cell Biology</td>
<td>4</td>
</tr>
<tr>
<td>CEMS 564</td>
<td>Biochemistry: Proteins and Metabolism</td>
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</tr>
<tr>
<td>CEMS 565</td>
<td>Biochemistry: Nucleic Acids</td>
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</table>

Ceramic Engineering

Overview

Ceramic Engineering is concerned with developing and manufacturing ceramic products, materials, and processes. Often characterized as "high temperature chemistry," ceramic engineering relies heavily on chemistry and physics of the solid state to measure and control the composition, structure, properties and performance of oxide and non-oxide materials. Processing, beginning with mining and raw material preparation, and including forming, drying, firing, decorating and quality assurance, lies at the heart of ceramic materials development and manufacture.

Ceramic materials are used in a wide range of extreme environments where their unique chemical, thermal, optical, electrical, magnetic, and mechanical properties lead to superior performance where other materials cannot survive.
Refractory ceramics provide the thermal envelop for the manufacture of metals and glasses and for power generation, both conventional and nuclear. Magnetic ceramics power dozens of motors in aircraft, cars and trucks and home appliances. Arguably, the "computer revolution" depends on the electrical and, more recently, the optical properties of ceramic materials, including glass.

Ceramic products range from familiar products that we all use every day to very advanced products used in transportation, medicine, national defense, communications, and computing. Everyday products include ceramic floor, wall and roof tiles, dinnerware, sanitary ware, electrical insulators for power transmission, cement and concrete for construction and transportation systems, glass products including flat glass (windows and architectural glasses), fiber glass insulation, TV glass for both the face and the "bulb" of TV tubes, and tableware. And the list goes on. Advanced ceramic products include glass fibers and active optical devices for communication, body armor for military and police, prosthetic devices for body part replacement, and high temperature materials for current and next-generation air and spacecrafts.

The M.S. Ceramic Engineering program at Alfred University seeks to provide students with practical, hands-on learning that is founded on the science of the solid state. Students gain experience using state-of-the-art processing, characterization, and property measurement equipment and instrumentation as tools aimed at solving real-world ceramic materials problems, often with industrial partners and mentors.

While it is true that many of our M.S. Ceramic Engineering graduates go on to pursue Ph.D. and other advanced professional degrees, our program is primarily designed for the student who recognizes that study beyond an engineering B.S. degree will be of great benefit to employment and success in the ceramics industries.

Graduates of the M.S. Ceramic Engineering program are well prepared for careers in the full range of ceramics industries, but thesis research will have focused attention and provided depth in a subset of opportunities of special interest to the student. Some graduates of the program continue their education by pursuing doctoral degrees in Ceramics and related technical fields, or in a broad range of professional degrees, including medicine, law, and business.

**Prerequisites and Undergraduate Preparation**

The program is open to qualified students holding Bachelor of Science degrees in an ABET accredited engineering program. Acceptance into the program is based on the applicant’s prior academic record, work experience, potential for growth, and the availability of space in the program. Ideally, applicants should present evidence of undergraduate-level competence in the following subject areas: 1) glass science, 2) ceramic processing, 3) thermal and mechanical properties of materials, and 4) electrical and optical properties of materials. Applicants without the required background will also be considered for admission, but may have to take prerequisite courses before enrolling specific graduate classes.

**Curriculum**

The Master of Science in Ceramic Engineering requires a minimum of thirty semester-hours of graduate credit of which at least fifteen must be in advanced coursework.
Degree Programs

The degree also requires a minimum of fourteen hours of thesis credit and a one-credit research seminar, which is taken during the first semester of graduate enrollment. Candidates for the degree are required (1) to present and defend a written thesis of their research and (2) to submit a manuscript suitable for publication in a peer-reviewed journal. The curriculum is designed to be completed in two years of full-time study.

Course Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CEMS 510</td>
<td>Advanced Ceramic Processing</td>
<td>3</td>
</tr>
<tr>
<td>or CEMS 511</td>
<td>Science of Whitewares</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 680</td>
<td>Graduate Thesis (14 credit minimum)</td>
<td>14</td>
</tr>
<tr>
<td>ENGR 660</td>
<td>Research Seminar</td>
<td>1</td>
</tr>
<tr>
<td>ENGR 690</td>
<td>Graduate Seminar (mandatory each semester)</td>
<td>0</td>
</tr>
</tbody>
</table>

Total Credit Hours Required for the Program 30

Characterization Elective

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEMS 541</td>
<td>Advanced Crystallography</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 542</td>
<td>Advanced Optical Microscopy</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 543</td>
<td>Analytical Transmission Electron Microscopy</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 544</td>
<td>Structure and Characterization of Glasses</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 545</td>
<td>Characterization in Materials Science and Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

Technical Electives

A technical elective in Ceramic Engineering is any graduate-level course in the School of Engineering except CEMS 519. Graduate-level courses offered in Chemistry, Physics or Mathematics may be used as technical electives with written approval of the thesis advisory committee.

Electrical Engineering

Overview

Electrical Engineering covers everything from power generation, transmission, distribution and utilization to microchip circuit design, control systems, communications systems, computer design, lasers, etc. Electrical engineering covers computers, controls, communication, power, and electronic materials. Graduates of the M.S. in E.E. program will pursue Ph.D., J.D., and M.D. degrees, or will enter the job market in the areas of electrical engineering, general engineering, management, research and development, teaching or other related profession.

The mission of the Electrical Engineering Graduate Program is to provide excellent learning opportunities for individual graduate students in our specialized areas, with a required research thesis or design project. At Alfred University, the Master of Science degree in Electrical Engineering seeks enable student to specialize in the following areas:

- Control systems
- Computer systems and software
- Optoelectronic and solid-state devices
- Power systems and machinery
- Electromagnetic waves & high voltage devices
- Renewable Energy Systems

Graduates of the program are well prepared to work in research and development, technical sales, product design, manufacturing, or management, just to name a few.
**Degree Programs**

**Prerequisites and Undergraduate Preparation**
The program is designed for individuals with a Bachelor of degree from an approved institution in a field of engineering or physics. Students with degrees from non-accredited engineering programs will also be considered for admission, but may have to take one or more course pre-requisites prior to enrolling in specific graduate credit courses. Acceptance is based on the candidate’s prior academic record, work experience, potential for growth, and the availability of space in the program.

**Curriculum**
The M.S. degree in Electrical Engineering requires a minimum of 30 semester hours of graduate credit, of which at least 5 classes must be in advanced course work. The selected elective courses must form a coherent plan of in-depth study and should be selected in consultation with the student’s advisor/thesis committee. A thesis or project is required of each candidate of the program. Candidates enrolled in full-time studies are required (1) to present and defend a written thesis of their research and (2) to submit a manuscript suitable for publication in a peer-reviewed journal. Candidates enrolled in part-time study are required to complete an engineering project, representing three semester-hours of credit, and to submit a written technical report.

For full-time students, the degree requirements must be completed within three years first enrolling as a graduate student at AU. For part-time students, this time limit is extended to six years.

**Course Requirements (Thesis Option)**

<table>
<thead>
<tr>
<th>Course Requirements (Thesis Option)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Electives</td>
<td>12-20</td>
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<tr>
<td>Math Elective</td>
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<tr>
<td>ELEC 680 Graduate Thesis</td>
<td>6-14</td>
</tr>
<tr>
<td>ENGR 690 Graduate Seminar (mandatory each semester)</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Credit Hours Required for the Program</strong></td>
<td><strong>30</strong></td>
</tr>
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**Course Requirements (Project Option)**

<table>
<thead>
<tr>
<th>Course Requirements (Project Option)</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Technical Electives</td>
<td>23</td>
</tr>
<tr>
<td>Math Elective</td>
<td>4</td>
</tr>
<tr>
<td>ELEC 699 Master’s Project</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credit Hours Required for the Program</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

**Technical Electives**
A technical elective in Electrical Engineering is any graduate-level course with the ELEC designation. Up to two graduate-level courses offered in the School of Engineering, Chemistry, and Physics may also be used as technical electives with written approval of the student's advisor and thesis committee.

**Mathematics Electives**
Select ELEC 588 or CEMS 506

<table>
<thead>
<tr>
<th>Mathematics Electives</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELEC 588 Applied Complex Variables</td>
<td>4</td>
</tr>
<tr>
<td>CEMS 506 Advanced Engineering Mathematics</td>
<td>4</td>
</tr>
</tbody>
</table>

**Glass Science**

**Overview**
Glass Science (GS) involves the study of non-crystalline materials, which may be inorganic, organic, or metallic in nature. Glass scientists and engineers at the M.S. degree level are employed in positions ranging from research to development to plant operations. Many M.S. degree recipients quickly enter into management positions.
Degree Programs

Glass science can be divided into the fields of consumer products, which includes flat and container glass, fiberglass, and glasses used to produce TV, CRT, PDA, and other electronic devices, and specialty glasses, which include optical fibers, photonic materials, glasses for electronic applications, biological applications of glasses, glasses for the isolation of radioactive waste materials, space technology, homeland security, and a host of other, continually evolving applications in the areas of advanced technology.

The Master of Science in Glass Science at Alfred University seeks to produce graduates who can immediately enter positions throughout industry and government laboratories or continue to a Ph.D. in glass, materials science, or biomaterials. Entering students should ideally have a B.S. degree in some area of materials science, physics, chemistry, or, if interested in biological applications of glass, biology. Students from other backgrounds will be considered, but may be required to take specific courses from our undergraduate program to correct deficiencies before beginning their graduate program. Students seeking a terminal M.S. degree should have a strong interest in the application of science to solving problems.

This program emphasizes “hands-on” studies, with a solid research experience through the thesis project. This approach provides a level of confidence in our graduates which is reflected in their ability to move into industrial positions with minimal adjustment time. A terminal M.S. degree is particularly suited for those who desire an industrial position, with rapid advancement into managerial ranks, or for those with the desire to work in development facilities. Our graduates are also well prepared to continue to a Ph.D. in glass, materials science, or biomaterials. Graduates of the program are well prepared for careers ranging from research and development to general plant operations.

Our graduates are employed at Corning, Inc., Owens-Corning, IBM, Naval Research Laboratory, the U.S. Patent Office, and a wide range of other facilities ranging from major corporations to national laboratories to small high technology companies at the cutting edge of materials technology. Many of our graduates make a rapid transition into managerial positions in industry. A significant number of our graduates continue their education by pursuing doctoral degrees in Glass and related fields, with many recent Ph.D. students particularly interested in optical and biological applications of glass.

Prerequisites and Undergraduate Preparation

The program is open to qualified students holding B.S. degrees in chemistry, physics, biology, and engineering programs in materials, ceramics, glass, polymers, or biomaterials. It is also possible for graduates in other engineering programs, e.g. EE, to qualify for admission. Ideally, applicants should present evidence of undergraduate-level competence in chemistry, physics, and math through differential equations, with some experience with materials science, including the mechanical, thermal, and electrical behavior of solids. Some knowledge of the structure of solids is also desirable. Applicants without the required background will also be considered for admission, but may have to take pre-requisite courses before enrolling specific graduate classes. Acceptance is based on the candidate’s prior academic record, work experience, potential for growth, and the availability of space in the program.

Curriculum

The Master of Science in Glass Science requires a minimum of thirty semester-hours of graduate credit of which at least fifteen must be in advanced coursework. The degree also requires a minimum of fourteen hours of thesis credit and a one-credit research seminar, which is taken during the first semester of graduate enrollment.
Candidates for the degree are required (1) to present and defend a written thesis of their research and (2) to submit a manuscript suitable for publication in a peer-reviewed journal. The curriculum is designed to be completed in three semesters of full-time study.

### Course Requirements

<table>
<thead>
<tr>
<th>Glass Electives</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characterization Electives</td>
<td>3</td>
</tr>
<tr>
<td>Technical Electives</td>
<td>6</td>
</tr>
<tr>
<td>CEMS 680 Graduate Thesis (14 credit minimum)</td>
<td>14</td>
</tr>
<tr>
<td>ENGR 660 Research Seminar</td>
<td>1</td>
</tr>
<tr>
<td>ENGR 690 Graduate Seminar (mandatory each semester)</td>
<td>0</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required for the Program**: 30

### Glass Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEMS 520</td>
<td>Optical Glasses</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 521</td>
<td>Behavior of Glass-forming Melts</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 522</td>
<td>Thermal Behavior of Glasses and Melts</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 523</td>
<td>Structure of Glasses</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 524</td>
<td>Mass Transport in Glasses and Melts</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 525</td>
<td>Advanced Optical Behavior of Glasses</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 526</td>
<td>Surface Properties of Glass</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 527</td>
<td>Structure and Characterization of Glasses</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 533</td>
<td>Mechanical Properties of Glasses and Ceramics</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 535</td>
<td>Principles and Technology of Photonic Devices</td>
<td>3</td>
</tr>
</tbody>
</table>

### Characterization Electives

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>CEMS 541</td>
<td>Advanced Crystallography</td>
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</tr>
<tr>
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</tr>
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<td>CEMS 544</td>
<td>Structure and Characterization of Glasses</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 545</td>
<td>Characterization in Materials Science and Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

### Materials Science and Engineering Overview

Material Science and Engineering (MSE) is concerned with the interrelationship among the structure, processing, properties, performance, and applications of materials, which includes ceramics, metals, polymers, and composites. MSE is an interdisciplinary field that combines aspects of chemistry, physics, mathematics, and engineering. Materials engineers provide “enabling technologies” for a wide range of industries including electronics, automotive, aerospace, medical, and more traditional manufacturing industries. Today, material science and engineering professionals are involved in developing improved fuel cells and hydrogen-storage devices for efficient energy production, designing lightweight and reliable materials for advanced aircraft and space vehicles, developing high temperature materials and coating for turbine applications, and devising remote sensors for detecting pathogens. Materials science and engineering also lies at the center of the nanotechnology revolution.

The Master of Science degree program in MSE at Alfred University seeks to provide students with a solid foundation in the fundamentals of material science while allowing them the flexibility to pursue advanced studies a focused area of their interest. The mission of the program is to prepare a graduate with both strong theoretical and “hands-on” laboratory skills.
A student in the MSE program can also use their choice of technical electives and thesis research topic to obtain a broad general materials background; or the student can specialize in a specific materials field (e.g. metals, ceramics, polymers, or composites processing) or a specific area of analysis and characterization (e.g. mechanical properties of materials, electrical properties of materials, X-ray analysis, spectroscopy, or electron microscopy).

Graduates of the program are well prepared for careers in industrial research and development, industrial process engineering, and research at national labs. Some graduates of the program continue their education by pursuing doctoral degrees in MSE and related fields. Others pursue professional degrees in business, law, and medicine.

**Prerequisites and Undergraduate Preparation**

The program is open to qualified students with Bachelor of Science degrees in engineering and the physical sciences. Students with a degree in another science or engineering field may have to take prerequisite undergraduate materials science and engineering courses before enrolling in specific graduate classes. Typically, the student and his or her advisor develop a plan of study at the start of the program based on the student’s background and the student’s research topic. Applicants without the required background will also be considered for admission, but acceptance is based on the candidate’s prior academic record, work experience, potential for growth, and the availability of space in the program.

**Curriculum**

The Master of Science in Materials Science and Engineering (MS-MSE) requires a minimum of thirty semester-hours of graduate credit of which at least fifteen must be in advanced coursework. The degree also requires a minimum of fourteen hours of thesis credit and a one-credit research seminar, which is taken during the first semester of graduate enrollment. Candidates for the degree are required (1) to present and defend a written thesis of their research and (2) to submit a manuscript suitable for publication in a peer-reviewed journal. The curriculum is designed to be completed in three semesters of full-time study although students with other engineering or science backgrounds may require four semesters.

**Course Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEMS 501</td>
<td>Solid State Physics</td>
<td>3</td>
</tr>
<tr>
<td>or CEMS 503</td>
<td>Thermodynamics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>CEMS 545</td>
<td>Characterization in Materials Science &amp; Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Technical Electives</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>CEMS 680</td>
<td>Graduate Thesis (14 credit minimum)</td>
<td>14</td>
</tr>
<tr>
<td>ENGR 660</td>
<td>Research Seminar</td>
<td>1</td>
</tr>
<tr>
<td>ENGR 690</td>
<td>Graduate Seminar (mandatory each semester)</td>
<td>0</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required for the Program** 30

**Technical Electives**

A technical elective in the MS-MSE program is any graduate course in the School of Engineering except CEMS 519. Graduate-level courses offered in Chemistry, Physics or Math may be used as technical electives with written approval of the thesis advisory committee.
Mechanical Engineering

Overview
Mechanical Engineering (ME) is one of the largest, broadest and oldest engineering disciplines. Mechanical engineers use the principles of energy, materials and mechanics to design and manufacture machines and devices of all kinds. Mechanical engineers also create the processes and systems that drive technology and industry. Mechanical engineers are often called the ‘general practitioners’ of engineering because of the broad scope of their education and the diversity of their professional opportunities. Due to its breadth, mechanical engineering is generally linked to the economy as a whole; job prospects are relatively immune to isolated economic events.

The field of ME is notable for emphasizing versatility. A mechanical engineering education is an excellent foundation for work in other fields. Versatility is an asset in a world that is undergoing constant economic, political, industrial and social change. Mechanical engineers are positioned, not only to adopt, but also to define and direct change.

The mission of the Mechanical Engineering program is to provide a superior student-centered engineering education within a small university environment. Our dedicated faculty places the highest value on the teaching-learning process, while also being active in professional, technical and scholarly activities. Graduates of our program will understand the social and ethical implications of their engineering decisions, and be prepared to excel in the engineering profession.

Prerequisites and Undergraduate Preparation
The program is designed for individuals with a Bachelor of Science degree from an ABET-accredited program in Mechanical Engineering. Students with bachelor’s degrees in other engineering fields and the physical sciences or with degrees from non-accredited engineering programs will also be considered for admission.

Those admitted may have to take one or more course prerequisites prior to enrolling in specific graduate credit courses. Acceptance is based on the individual’s prior academic achievements and work experience, and upon the availability of space in the program.

Curriculum
The program leading to the M.S. degree in Mechanical Engineering requires a minimum of 30 semester hours of graduate credit, of which at least 24 credit hours must be in advanced course work. The selected elective courses must form a coherent plan of in-depth study and should be selected in consultation with the student’s advisor/thesis committee. Candidates for the degree are required (1) to present and defend a written thesis of their research and (2) to submit a manuscript suitable for publication in a peer-reviewed journal. For full-time students, the degree requirements must be completed within three years of first enrolling as a graduate student at AU. For part-time students, this time limit is extended to six years.

Course Requirements (Thesis Option)
| Technical Electives                              | 24 |
| MECH 680 Graduate Thesis                        | 6  |
| ENGR 690 Graduate Seminar (mandatory each semester) | 0  |
| **Total Credit Hours Required for the Program**  | **30** |
Degree Programs

Course Requirements (Project Option)

Technical Electives 27
MECH 699 Master’s Project 3
Total Credit Hours Required for the Program 30

Technical Electives
A technical elective in Mechanical Engineering is any graduate-level course with the MECH designation. Graduate-level courses offered in the School of Engineering, Chemistry, Physics, and Mathematics may also be used as technical electives with written approval of the student's advisor and thesis committee.

Doctor of Philosophy Degrees in Engineering and Science

The Inamori School of Engineering offers the Ph.D. in three fields:
- Ceramics
- Glass Science
- Materials Science & Engineering

The Ph.D. programs are open to qualified students holding Bachelor of Science and Master of Science degrees in the fields of science and engineering. Acceptance into the program is based on the applicant’s prior academic record, previous work experience, potential for growth, and the availability of space in the program.

The Ph.D. degrees require ninety credit hours beyond the requirements for the baccalaureate degree. Of these, a minimum of thirty-three credit hours must be in regular course work; the remainder may be earned as thesis credits. There is also a two-year residency requirement.

All three programs require the following four core courses:

CEMS 503 Thermodynamics of Materials
CEMS 504 Kinetics and Non-equilibrium Processes in Materials
CEMS 501 Solid State Physics
CEMS 506 Advanced Engineering Math

All three programs also require successful completion of ENGR 660 - Research Seminar during the first semester, and attendance of ENGR 690 - Graduate Seminar during each semester in residence at Alfred University. Additional course requirements in the Material Science and Engineering program include CEMS 502 - Quantum Physics, CEMS 505 - Defects and Defect-Related Processes, and CEMS 545 Characterization in Materials Science and Engineering. Students enrolled in the Glass Science program must complete fifteen credit hours of Glass courses work (CEMS 52X).

Students enrolled in the Ph.D. programs must pass a qualifying exam, usually within the first year of their enrollment.

Candidates for the degree must write, present and successfully defend a doctoral thesis based on independent and original research conducted by the student. Prior to displaying the thesis, candidates for the Ph.D. degree must present a minimum of three accepted peer-reviewed publications. Thirty credit hours in thesis work must be a recorded part of each student’s program, and as many as fifty credit hours may be included, but the accumulation of these credits does not in itself imply the satisfaction of the requirement. The thesis must be acceptable for publication.
Degree Programs

During the first semester, the student will select, with the approval of the Dean of Engineering, a faculty member of the School of Engineering to be his/her advisor. The advisor will then select at least three more members of the faculty, with due consideration of the specific research interest of the student, to form the Advisory Committee. This Committee will guide the student in course selections, thesis research, preparation for qualifying and final oral examinations, and, in general, care for the student’s academic well-being.

Off-Campus Programs

Downstate Programs
Alfred University offers a number of Masters-level programs in the New York City metropolitan area which are extension programs of regular campus offerings. Courses are made available through the Center for Integrated Teacher Education (CITE), which has provided professional development and in-service courses for teachers, principals, and related school staff since 1983. CITE is a professional service organization that manages the logistical operations for Alfred's Downstate Programs. Classes for AU’s Downstate Programs are offered at venues in Brooklyn and Oceanside, Long Island. Alfred University's Downstate Program is designed for working professionals and recent college graduates in the Metropolitan Area. Students in the program are expected to maintain Alfred University's standard of graduate study. This program requires a basic level of computer and email literacy.

Programs Offered
- Master of Science in Education (MSEd) in School Counseling
- Master of Science in Education (MSEd)/Certificate of Advanced Study in Mental Health Counseling
- Master of Science in Education (MSEd) in Literacy
- Certificate of Advanced Study in Mental Health Counseling
- Master of Public Administration (MPA) (available off-campus only; see below)

Curriculum
The program is structured to allow separate groups of no more than 25 students to enter each program. Each group remains together through the entire program, attending classes year-round for two years (Counseling), or 15 months (Public Administration), including summers. First year classes are prerequisites for all other classes in the program. Counseling and public administration programs adhere to fall start dates. The literacy and certificate of advanced study programs admit cohorts in the fall and spring.

All Downstate students are required to attend courses on the Alfred University campus in western New York State during each year of the program. Students in the Literacy, Public Administration, and Certificate of Advanced Study in Mental Health Counseling attend courses one summer only. Students in the MSEd in School Counseling program attend courses during the two summers that they are enrolled in the program. Students in the MSEd/Certificate of Advanced Study in Mental Health Counseling program attend courses during the three summers that they are enrolled. Students are notified regarding the schedule for these summer classes.

All matriculated students in the Downstate Program are regular Alfred University students. As such, they have access to the University's on-line resources and to their academic records through AU BannerWeb. Details regarding these privileges are outlined in the program handbook that students receive at orientation.
Degree Programs

Campus Visit Requirement
Each Downstate Program requires that students attend on-campus courses for one week during the summers that they are enrolled. The number of courses varies based on the length of the program. During campus visits, students attend class and participate in a program orientation. Campus housing is available to students. Alfred University and CITE assist students in making arrangements. Costs associated with these visits are not included in the cost of tuition. Information about transportation and housing is distributed to accepted students.

Master of Science in Education in School Counseling
Alfred University’s graduate program in counseling prepares individuals for counseling positions in elementary, middle and high schools, colleges and universities.
Students acquire core knowledge and clinical skills that enable them to enter the profession of counseling. We (the faculty) strive to create a rigorous scholarly and supportive atmosphere for students to develop intellectually with a deep sense of social consciousness and self-awareness. We value teaching, scholarship, and service, which contribute to the mission of Alfred University.

The Alfred University school counseling program focuses on developing a broad set of helping skills that are applicable to any school setting in which counselors work. Students develop these skills both in and out of the classroom. Students spend over 50 days (300 clock hours) in a school setting. Coursework in the program offers practice in a range of counseling skills, while the field experience provides the student with a practical application in the area of counseling that he or she wishes to pursue. Recent practicum sites include: public elementary, middle and high schools, charter schools, after-school programs, Young Adult Borough Centers (YABC), and Saturday school programs.

Course Requirements and Sequence

Summer – Year 1
COUN 602 The Professional and Ethical Foundations of Counseling 3

Fall - Year 1
COUN 636 Principles of Counseling 3
COUN 642 Multi-cultural Counseling 3
COUN 606 Human Development: The Lifespan 3

Spring - Year 1
COUN 639 Group Counseling 3
COUN 604 Foundations of School Counseling 3
COUN 616 Mental Health, Exceptionality, and Disability 3

Summer - Year 2
COUN 626 Assessment in Counseling 3
COUN 605 Career Development and Life Planning 3
COUN 652 Techniques of Family Therapy 3

Fall - Year 2
COUN 638 Advanced Counseling Theory and Practice 3
COUN 657 Practicum in Counseling I 3
PSYC 646 Consultation and Prevention 3

Spring - Year 2
COUN 671 Research and Statistics 3
COUN 695 Topics in Counseling/Internship Seminar 3
COUN 658 Practicum in Counseling II 3

Program Total 48
Master of Science in Education/Certificate of Advanced Study in Mental Health Counseling

Alfred University’s graduate program in mental health counseling prepares individuals for counseling positions in public and private agencies that provide mental health and alcohol/substance abuse treatment. The program focuses on developing a broad set of helping skills that are applicable to any mental health setting in which counselors work.

Students develop these skills both in and out of the classroom. Students spend over 100 days (700) clock hours in mental health settings. Coursework in the program offers practice in a range of counseling skills, while the field experience provides the student with a practical application in the area of counseling that he or she wishes to pursue. Recent internship sites include: outpatient centers of hospitals, in-patient psychiatric units, residential substance abuse programs, outpatient substance abuse programs, multi-service agencies, and private practices.

This program requires that students complete 60 credit-hours of course work, including a 3-credit practicum experience and two 3-credit internships. Individuals who successfully complete this program are eligible for the limited permit as a mental health counselor in New York State. Graduates must then complete 3,000 hours (approximately 2-years, fulltime) of supervised mental health counseling experience (1,500 hours of which must be direct client contact), and pass the Certified Clinical Mental Health Counselor examination which serves as the licensing exam for New York State.

Course Requirements and Sequence

<table>
<thead>
<tr>
<th>Summer – Year 1</th>
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<tbody>
<tr>
<td>COUN 602</td>
<td>Professional and Ethical Foundations of Counseling 3</td>
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<td>Fall - Year 1</td>
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<tr>
<td>COUN 636</td>
<td>Principles of Counseling 3</td>
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<tr>
<td>COUN 642</td>
<td>Multi-cultural Counseling 3</td>
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<tr>
<td>COUN 606</td>
<td>Human Development: The Lifespan 3</td>
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<td>Spring - Year 1</td>
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<tr>
<td>COUN 639</td>
<td>Group Counseling 3</td>
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<tr>
<td>COUN 604</td>
<td>Foundations in School Counseling 3</td>
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<tr>
<td>COUN 615</td>
<td>Psychopathology and Differential Diagnosis 3</td>
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<td>Summer - Year 2</td>
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<td>COUN 626</td>
<td>Assessment in Counseling 3</td>
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<td>COUN 638</td>
<td>Advanced Counseling Theory and Practice 3</td>
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<td>COUN 657</td>
<td>Practicum in Counseling I 3</td>
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<td>PSYC 646</td>
<td>Consultation and Prevention 3</td>
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<td>Spring - Year 2</td>
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<tr>
<td>COUN 671</td>
<td>Research and Statistics 3</td>
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<tr>
<td>COUN 641</td>
<td>Counseling Special Populations 3</td>
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<tr>
<td>COUN 695</td>
<td>Topics in Counseling/Internship Seminar 3</td>
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<tr>
<td>COUN 663</td>
<td>Internship in Mental Health Counseling I 3</td>
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<tr>
<td>Summer Year 3</td>
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<tr>
<td>COUN 628</td>
<td>Assessment in Mental Health Counseling 3</td>
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<tr>
<td>COUN 619</td>
<td>Program Development and Grantsmanship 3</td>
</tr>
<tr>
<td>COUN 664</td>
<td>Internship in Mental Health Counseling II 3</td>
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</tbody>
</table>

**Program Total** 60
**Degree Programs**

**Certificate of Advanced Study in Mental Health Counseling**

The Certificate of Advanced Study in Mental Health Counseling is a part-time program designed for individuals who have already earned master’s degrees in counseling and either majored in school counseling or did not fulfill the eligibility requirements for the mental health license. This includes master’s degrees in school counseling, school psychology, community-agency counseling, and college counseling/college student development, older general counseling degrees, applied psychology with a counseling specialization, and human services with a counseling specialization. It does not include master’s degrees in general psychology, experimental psychology, social work, human development, or human services without a counseling specialization. Licensure regulations are very specific in requiring a master’s degree in counseling.

The CAS is an 18 graduate credit program consisting of four 3-credit classroom-based courses and two 3-credit internship courses spanning three semesters. All courses and internship requirements are designed to meet the defined training requirements for the Licensed Mental Health Counselor (LMHC) credential in New York State. As an approved program, individuals who successfully earn the CAS have completed the degree requirements that make them eligible for the LMHC.

Mental health counselors must have a critical body of knowledge and set of skills in order to help clients function effectively in their lives. To achieve this goal, the program requires that students who enter the program have successfully completed a master’s degree in counseling that includes the following foundation areas: human growth and development; social and cultural foundations; the nature of helping relationships; group theory and group process; family counseling skills; career and lifestyle development; appraisal, research and program evaluation; ethics, professional standards, and credentialing; and professional issues. The CAS program then supplements these basic foundations with course work specific to the mental health setting. Finally, each student is required complete and internship experience in order to ensure that students are able to apply the skills and knowledge they have learned, as well as meet the NYS regulations for the LMHC.

### Course Requirements and Sequence

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Semester 2</th>
<th>Semester 3</th>
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<tbody>
<tr>
<td>COUN 603  Foundations of Mental Health Counseling</td>
<td>COUN 615  Psychopathology and Differential Diagnosis</td>
<td>COUN 619  Program Development and Grantsmanship</td>
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<td>COUN 628  Assessment in Mental Health Counseling</td>
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<tr>
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<td>COUN 664  Internship in Mental Health Counseling II</td>
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<tr>
<td>or COUN 641  Counseling Special Populations</td>
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</tbody>
</table>

**Program Total** 18*

*Individuals who have earned master’s degrees consisting of less than 42 credits may be required to complete additional coursework to bring them up to the licensing requirement of 60 graduate credits.*
Master of Science in Education in Literacy
The Division of Education offers a program in Literacy Teaching of literacy leading to the Master of Science in Education (M.S.Ed.). The graduate program in literacy is designed to prepare master teachers of literacy as consultants, program coordinators, specialists and classroom teachers (birth through grade 6). The program's emphasis is placed on the practical application of current reading approaches and strategies, materials, methodologies, goal assessment, techniques, evaluation, and professional responsibilities of the literacy teacher. Upon completion of the program, the student is expected to demonstrate a thorough knowledge of both developmental and remedial literacy.

Mission and Objectives
The Education Division at Alfred University is accredited by the Teacher Education Accreditation Council (TEAC). Alfred University collects and analyses evidence of the following claims and cross cutting themes as a means of continual improvement.

The Alfred University Division of Education Claims
1. Graduates of our programs learn and understand the subject matter they are certified to teach.
2. Graduates of our programs learn how to convert their knowledge of a subject matter into compelling lessons that meet the needs of all learners.
3. Graduates of our programs act on their knowledge in a caring and professional manner that leads to achievement for all learners.

Cross-cutting dimensions integrated throughout the program
- Learning how to learn
- Multicultural perspectives and understanding
- Technology

Literacy Teacher Program (Birth – Grade 6)
Graduates of the Literacy program have completed the academic requirements for professional certification in all teaching areas, (including Early Childhood/Childhood, Art, and Middle and Adolescent subjects) regardless of the subject area of their initial certification.

Purpose of the Degree
The graduate program in literacy is designed to prepare master teachers of literacy as consultants, program coordinators, specialists and classroom teachers (Birth - grade 6). The program's emphasis is placed on the practical application of current reading approaches and strategies, materials, methodologies, goal assessment, techniques, evaluation, and professional responsibilities of the literacy teacher. Upon completion of the program, the student is expected to demonstrate a thorough knowledge of both developmental and remedial literacy (Birth - grade 6).

Admission to the Literacy Program
Prior to entering the Literacy Program, applicants must meet all requirements for current New York State classroom teacher certification. Applicants must provide evidence of teacher certification, official undergraduate transcripts and letters of recommendation as required in the graduate application process.

GPA Requirement
All graduate students admitted to Alfred University must maintain a grade point average of 3.00 or higher. In addition, to be eligible for certification in New York, students in this program should have no grade below “B” in core pedagogical courses.
Certification
The degree in Literacy meets the criteria for, and may be used in partial fulfillment of, the requirements for permanent and professional certification in New York. Additionally, students completing the Literacy Program fulfill the requirements for certification in Literacy (Pre-K - grade 6).

Required Courses
EDUC 503 Competency in the Teaching of Literacy 3
EDUC 504 Diagnostic and Remedial Techniques in Literacy 3
EDUC 505 Literacy in the Content Areas 3
EDUC 507 Literacy Seminar and Field Experience 6
EDUC 513 Literature for Children 3
SPED 556 Teaching Students with Special Needs in the Inclusive Classroom 3
EDUC 695 Master’s Research 3

Elective Courses
Select two of the following*:
EDUC 593 Use of Technology in the Classroom 3
SPED 545 Learning Disabilities 3
SPED 558 Managing the Classroom 3
EDUC 542 The Teaching-Learning Process 3

*with advisor approval, other electives may be substituted

Total Credit Hours Required 30

Master of Public Administration Program
The MPA program is designed for those interested in management, administration, and the design and implementation of services in public, nonprofit, and community-based agencies. Interest areas include law enforcement, probation, youth corrections, community planning and development, programs for the aging, housing, public health, hospital administration, city and county administration, welfare services, social counseling and other municipal and social services.

The program fulfills the graduate educational requirements for working professionals who wish to advance their careers, and for pre-service students who wish to enter the government and nonprofit sectors. The program focuses on public policy issues, organizational behaviors and development, budget formation and management, and on utilizing effective management techniques and decision-making skills in the delivery of goods and services by nonprofit and public organizations.

Program Process
The MPA program is designed to be a part-time program for working adults. All classes meet for full days on weekends, with each course consisting of five class sessions. Students become part of a group that meets on Saturdays or Sundays and remains together for the duration of the program. Core courses relate to the needs of those intending to serve in administrative and managerial roles in health care, nonprofit, community-based agencies, and criminal justice organizations. Elective courses include public sector budgeting and accounting, legal and regulatory issues, program evaluation, and specialty topics in health care and non-profit management. Students who follow the prescribed course sequence can expect to complete the program in 15 months, including two summers of academic work.
### Degree Programs

#### Course Sequence

**Semester 1**
- **PUAD 510** Principles of Public Administration 3
- **PUAD 531** Political Environment and Public Policy 3
- **PUAD 571** Public Administration and Agency Management 3
- **PUAD 598** Capstone Seminar (Foundation)

**Semester 2**
- **PUAD 542** Legal Issues in Administrative Law 3
- **PUAD 537** Foundations of Non-Profit Management 3
- **PUAD 535** Foundations of Healthcare Management 3
- **PUAD 598** Capstone Seminar I 1

**Semester 3**
- **PUAD 561** Organizational Processes 3
- **PUAD 528** Public Sector Budgeting and Accounting 3
- **PUAD 541** Program Evaluation and Grantsmanship 3
  - (Summer Residency Week in August)

**Semester 4**
- **PUAD 581** Human Resources Administration 3
- **PUAD 597** Special Topics in Public Administration 3
- **PUAD 599** Capstone Seminar II 2

**Program Total** 36