



Alfred University

2006-2008 Graduate Catalog

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6 Alfred University at a Glance

Character

Selective, nonsectarian university comprised of the Colleges of Liberal Arts & Sciences and Business, the School of Art & Design, the Inamori School of Engineering, and the Graduate School

History

Founded in 1836 - oldest coeducational institution in New York and the second oldest in the nation

Location

Village of Alfred, NY – a small, scenic, residential community between the foothills of the Allegheny Mountains and the Finger Lakes

Campus

232-acre campus with more than 50 academic and residential buildings

Accreditation

Middle States Association
NY State Education
Department
Accreditation Board for
Engineering and Technology
(ceramic engineering, electrical engineering, glass engineering science, materials science and engineering, mechanical engineering)
National Association of
Schools of Art and Design
American Chemical Society
Association to Advance
Collegiate Schools of
Business

Academic Calendar

Two semesters and two
Summer School sessions

Faculty

179 full-time faculty.
Doctorates or terminal degrees
in their discipline: 90%
Faculty/student ratio: 1:12
Average class size: 18 students

College of Business

Offers the B.S. degree in
Accounting, Business
Administration, Finance, and
Marketing with career
emphasis in:
Business Economics
Family Business
Entrepreneurship
Management
Management Information
Systems
International Business
4+1 MBA Program for
Business, Liberal Arts,
and Engineering Students

College of Liberal Arts and Sciences

Offers the B.A. degree with
majors in:
Biology
Chemistry
Communication Studies
Comparative Cultures
Computer Science
Criminal Justice Studies
Early Childhood/Childhood
Education
Economics
English
Environmental Studies
Fine Arts
French
General Science
German
Geology
Gerontology
Global Studies
History
Individually Structured
Major (Track II)

Interdepartmental Major
(General Studies)

Mathematics
Philosophy
Physics
Political Science
Psychology
Sociology
Spanish
Theatre

Offers the B.S. degree with
major in Athletic Training
Offers Minors in many
academic and professional
subjects
Pre-Health and Pre-Law
preparation available

Double-degree Program

Awards the B.A. in any of the
above majors plus the B.S. or
B.F.A. in the College of
Business, Inamori School of
Engineering or School of
Art & Design.

New York State College of Ceramics

School of Art and Design
Offers the B.F.A. degree with
concentrations in:
Ceramic Art
Video & Sonic Arts
Graphic Design
Print Media
Drawing, Painting, &
Photography
Glass, Wood, Metal, Paper,
Neon

School of Engineering

Offers the B.S. degree with
majors in:
Biomedical Materials
Engineering Science,
Ceramic Engineering,
Electrical Engineering,
Glass Engineering Science,
Materials Science and
Engineering,
Mechanical Engineering

The Graduate School

- Master of Fine Arts
 - Ceramic Art, Electronic Integrated Arts, Sculpture/ Dimensional Studies
- Master of Business Administration
- Master of Professional Studies
 - Community Services Administration
- Master of Arts
 - School Psychology
- Master of Science in Education
 - Counseling
 - Literacy Teacher
- Master of Science
 - Biomedical Materials Engineering Science
 - Ceramic Engineering
 - Electrical Engineering
 - Glass Science
 - Materials Science and Engineering
 - Mechanical Engineering
- Certificates of Advanced Study
 - Counseling
 - School Psychology
- Doctor of Philosophy
 - Ceramics
 - Glass Science
 - Materials Science and Engineering
- Doctor of Psychology
 - School Psychology

Facilities and Equipment

Art Galleries

- Museum of Ceramic Art
- Fosdick-Nelson Gallery
- Robert Turner Student Gallery

Theater

Seating capacity for 450, semi-thrust proscenium

Technology

100 Mbps network provides internet access to every residence hall room, classroom, and office 24 hours per day, 7 days per week. Computing labs are available with access to Windows, Macintosh, Linux or UNIX operating systems. Wireless internet access available at a growing list of campus locations.

Libraries

- Herrick Memorial Library
- Scholes Library of Ceramics

University Profile

Pioneer Seventh Day Baptists who had settled in the foothills of the Allegheny Mountains founded Alfred University as a select school in 1836. Alfred became the first coeducational institution in New York State and the second in the nation. About 2,000 full-time undergraduate and 300 graduate students work and live in 52 buildings on a scenic 232-acre hillside campus adjoining the village of Alfred. Another 400 acres of recreational land is just minutes away.

The nonsectarian University is comprised of the privately endowed College of Business, the College of Liberal Arts and Sciences, and the New York State College of Ceramics (Kazuo Inamori School of Engineering and School of Art and Design). Bachelors, masters, and doctoral degrees are awarded as the culmination of Alfred University's academic and professional programs.

With its traditional emphasis on providing a high quality of education, Alfred University expects:

- academic achievement from students accepted under a selective admissions policy
- individual students to accept responsibility for learning
- faculty members' highest priority to be teaching
- a stimulating diversity in academic programs, career objectives and personal value systems
- students, faculty and staff to work together in a friendly atmosphere of mutual respect

Mission Statement

Alfred University's mission is to provide academically challenging programs in a caring environment. Its aim is to prepare well-educated, independent thinkers, ready for lives of continuous intellectual and personal growth. Alfred is a student-centered, comprehensive university offering a wide range of learning opportunities. It is at once small and complex, private and public, undergraduate and graduate, rural and globally connected. Alfred is committed to both teaching and research. It is devoted to the pursuit of technical expertise, artistic creativity, and humanistic learning. Alfred University is proud of its history of promoting equality and respecting diversity. Its intimate atmosphere fosters a strong sense of community among students, faculty, staff, and alumni.

In 1938, the Board of Trustees of Alfred University established the Graduate Division of the College of Liberal Arts. This action was motivated by both a desire to implement and encourage research and a concern for the improved training of secondary school teachers. In time it became apparent that the growing needs for advanced work in the geographic area served by Alfred University demanded an organization educationally and administratively more functional than the graduate division. Therefore, in 1947, the Board of Trustees established the Graduate School at Alfred University.

Today the Graduate Council administers and guides all graduate programs throughout the University, providing unity and direction for graduate study.

Alfred University graduate students are enrolled in six master's and two doctoral degree programs with numerous areas of specialization. Admission is selective, ensuring that all graduate students are intellectually and academically outstanding. Student quality and the intimate size of each program create an intellectually stimulating and challenging academic environment on a personal scale.

Alfred is known for the quality and diversity of its academic and professional programs—usually expected only of large universities—within a personalized, intimate setting, normally found in small colleges.

Admissions, Tuition, Financial Aid

Admissions

The University admits to programs of graduate study those students who hold four-year baccalaureate degrees from an accredited college or university, and demonstrate the ability to perform credibly at the graduate level. Applicant qualifications are judged by the faculty of the department of program to which they apply, and by the Coordinator of Graduate Studies.

Each successful applicant is admitted into a program leading to an advanced degree, and expected to follow a planned course of study (within the degree of flexibility set forth in program descriptions in this catalog). On occasion, otherwise well-qualified students are admitted provisionally to degree programs for which their undergraduate careers have prepared them inadequately. Such students must take the requisite undergraduate courses, without graduate credit, before being admitted to full graduate standing.

Applicants who do not satisfy the customary requirements, but who demonstrate promise in some way, are sometimes admitted provisionally, with enrollment in a degree program decided on the basis of one semester of work.

Non-Degree Students

The Graduate School recognizes the desire or need of college graduates to enroll for a limited number of graduate courses without any wish to attain an advanced degree. A maximum of nine credit hours is permitted on this basis. Students who wish to take courses “non-degree” need not apply for Admission, but should contact the Student Service Center in Seidlin Hall for information about registration.

Credit hours earned “non-degree” before admission to an Alfred University graduate degree program may or may not be applicable toward the degree sought. If denied admission, the applicant may not register for further non-degree graduate work. During the Fall and Spring Semesters, non-degree study is not permitted in graduate Art or Art History courses, but is permitted in Summer Sessions.

Those who already possess an advanced degree may earn more than nine credit hours on a non-degree basis.

Application Procedures

Application materials may be obtained by calling or by writing to:

Graduate Admissions Office, Alfred University, Alumni Hall, One Saxon Drive, Alfred, NY 14802; (607) 871-2141 or (800) 541-9229 or application can be completed on-line at: www.alfred.edu/admissions/apply/index.html.

The materials and credentials to be completed and returned by each applicant include the following: (1) an Alfred University application, (2) \$50 application fee, (3) official transcripts of all previous post-high school academic work, (4) two letters of recommendation from former instructors or employers (three letters for the School Psychology Program), (5) a personal statement, (6) and for some programs, records of scores on standardized admissions tests, interviews with faculty, and/or a portfolio of slides.

Test of English as a Foreign Language

For international student applicants whose native language is not English, the official results of the Test of English as a Foreign Language (TOEFL) must be submitted to the Graduate Admissions Office. The Test of Written English (TWE) is optional and the Test of Spoken English (TSE) is recommended but not required.

Graduate Record Examination

Applicants to M.A., C.A.S., or Doctor of Psychology (Psy.D.) degree programs in School Psychology must submit official scores of the general section of the Graduate Record Examination (GRE). Students applying to graduate programs in engineering are encouraged to submit their scores.

Graduate Management Admissions Test

Applicants to the M.B.A. degree program must submit an official GMAT score.

Portfolio

Applicants to the M.F.A. program must submit a portfolio of twenty 35mm-color slides in clear plastic sleeves. Applicants to the Electronic Integrated Arts program may submit slides, CD-ROMs, DVDs, or cued videotapes. The portfolio should be accompanied by a self-addressed, postage paid envelope so that the portfolio can be returned. Further requirements of the portfolio can be found under the program description sections of this catalog.

Application Fee

A non-refundable application fee of \$50 is charged for each application (the fee is waived for online applications). A check or money order in this amount made payable to Alfred University should accompany the application for admission. The application will not be processed until this fee is paid.

Interview

Applicants to the Counseling, and School Psychology programs are expected to have an on-campus interview. Interviews are also required of students applying to the MEd degree programs and are recommended for applicants to the M.F.A. program.

Application Deadlines

The deadline for applications to the M.F.A. program is February 1. The deadline for applications to the Doctor of Psychology (Psy.D.) program in School Psychology is January 15. Review of applications for the MA/CAS program in School Psychology will begin on February 15. Late applications may be considered if places in the class still exist for qualified applicants. Early application is strongly encouraged.

Immunization Requirements

Students born after December 31, 1956 must provide written documentation of immunity to measles, mumps, and rubella, as required by New York State Public Health Law 2165. Students who do not comply will be withdrawn from the University and will not be able to attend classes. Questions regarding this requirement or any other aspects of student health services may be directed to the Crandall Health Center at (607) 871-2400.

Changing Degree Programs

If a student wishes to change from one degree program to another after acceptance to the Graduate School, an application may be made through the Graduate Admissions Office to the Committee on Admissions for the new program desired. Any credits earned before such a change may or may not be applicable toward the degree in the new program.

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Deposit

Each applicant who is accepted as a full-time graduate student is sent an acceptance letter, medical form and Graduate Studies Financial Aid form. The student is required to sign a copy of the acceptance letter and return it to the Graduate School Office along with a \$200 deposit signifying intention to enter the Graduate School. The Graduate School Financial Aid form should also be returned with the deposit if the student wishes to be considered for Alfred University Graduate Aid. The medical form must be completed and returned to the Health Services Office in Crandall Hall prior to the beginning of the student's program of study.

Failure to return a signed copy of the acceptance letter and making the \$200 deposit within the time period specified may void the acceptance. The deposit, less any unpaid charges, is refunded after graduation (or after leaving the University, provided the student follows the prescribed procedure for discontinuing the program described below). The deposit is not deducted from any subsequent term bill. It is forfeited if the student withdraws prior to attending classes or does not enter the Graduate School.

Withdrawal

A student who is obliged for any reason to leave the University with no intention of returning must first consult with the Director of his or her degree program. A Graduate Withdrawal Form, available in the Graduate Admissions Office, must be completed and submitted. Students who plan to withdraw at the end of the semester are also required to notify the Director. Such initiation of withdrawal allows for proper guidance of the student, and is necessary if the student is to receive the expected refund.

Transfer Credit

No more than 6 graduate semester credit hours may be transferred to the master's degree (except for the M.F.A degree program, in which no transfer credit is permitted). Students who enter the doctoral program with advanced standing (a master's degree in the field) must complete at least 50% of their credits for doctoral coursework at Alfred University. Acceptance of transfer credit is the prerogative of the director of the particular graduate program. Additional restrictions may apply in specific programs.

Tuition and Fees

For full-time students enrolled in programs leading to the degree of Master of Arts, Doctor of Psychology, Master of Science in Education, Master of Professional Studies, or Master of Business Administration, the comprehensive tuition in 2006-07 is \$29,600 per year, which covers costs for all instruction totaling twelve to eighteen credit-hours each semester.

For full-time students enrolled in the graduate engineering programs leading to the Master of Science or the Doctor of Philosophy degree the annual tuition for 2006-2007 is \$17,530.

For full-time students enrolled in the statutory college programs leading to the degree Master of Fine Arts, annual tuition for 2006-2007 is \$17,530.

Each student is required to pay a student services fee. For the 2006-2007 academic year, this fee is \$850 for full-time students and \$140 per semester for part-time students.

Part-time students are billed at the part-time instruction rate. The current part-time rate is available through the Graduate School or Business Office. It should be noted that students in residence who have completed all credit-hour requirements, but who are engaged in thesis research, will be considered full-time students and billed accordingly.

Other Fees

A late registration fee of \$35 is charged to cover the cost of processing registrations or payments that are not made during the prescribed time.

Graduate students with motor vehicles must register with the Director of Safety.

The application fee of \$50 and the \$200 deposit have been discussed under the “**Admissions**” section.

Master of Fine Arts students are responsible for appropriate studio materials fees.

Notes on Living Expenses

Although these expenses vary widely from one student to another, one can estimate that board and room can be obtained for \$9,900 or less per school year in the Alfred area based on 2006-2007 rates.

Students who are interested in special on-campus accommodations, or who desire help in locating off-campus housing, should write the Office of Residence Life, Bartlett Hall, One Saxon Drive, Alfred, NY 14802 or call (607) 871-2186.

Payment and Rebates

Bills covering all charges for the first semester are mailed to the student's permanent address in July and must be paid by August 5. Bills covering charges for the second semester will be mailed during December and must be paid by January 10. A \$35 fee will be charged for payments received after the fall semester due date.

Spring semester rates will be 1.5% monthly based on the unpaid balance. Rebates during the regular academic year are as follows: for students withdrawing before the first day of classes, 100 percent of tuition; for a withdrawal during the first or second weeks (for rebate purposes a week is seven calendar days beginning with the first day of classes), 80 percent; during the third and fourth weeks, 60 percent; during the fifth and sixth weeks, 40 percent; during the seventh and eighth weeks, 20 percent. There will be no tuition rebate for withdrawals after 56 calendar days of each semester. New full-time graduate students who withdraw during their first semester at Alfred forfeit the full amount of their acceptance deposit. However, an amount equal to the acceptance deposit may be applied against any charges accrued for tuition. It is important that the student formally withdraw from the University since the refund is determined by the date of receipt of the Withdrawal Notice. Summer School charges are described in the Summer School Schedule of Courses.

Students are required to meet all financial obligations to the University when due. If delinquent in meeting financial obligations to the University or any University organization, a student will not be able to receive a transcript or, upon graduation, a diploma.

Summer School

Information on the various sessions of the Summer School may be obtained by contacting the Summer Programs Office, Alumni Hall, One Saxon Drive, Alfred, N.Y.14802; (607) 871-2612.

Financial Aid

Alfred University provides substantial financial support for graduate study. Most of the University funded assistance is provided in the form of assistantships and fellowships. In addition to its own resources, the University participates in federal and state aid programs that are applicable to its degree programs. The majority of this funding is in the form of low interest student loans. This section highlights and summarizes the available funding sources. Questions and requests for further information should be directed to the Student Financial Aid Office.

Alfred University Funded Aid Assistantships and Fellowships

Award values vary widely. University funded assistantships may range from a work stipend only to a combination of tuition grant, up to full-tuition, and a stipend. All University sponsored assistantships will require a work commitment from the student. Work assignments may include research, teaching, faculty assistance and administrative support.

Assistantships and Fellowships are determined and awarded by the academic departments and faculty advisors. In the assignment of assistantships, factors such as academic record, purpose in graduate study, professional accomplishments, employment experience as well as personal skills and character may be considered. Most assistantship awards are made prior to enrollment during the admissions process. However, some additional assistantship funding may become available after enrollment depending on the timing of research contracts and grants secured by the faculty.

Generally speaking, all full-time students in programs leading to the degree of Master of Arts, Doctor of Psychology, Master of Science in Education, and Master of Business Administration are offered a University funded half-tuition assistantship upon admission. Seventy-five percent of the assistantship value is paid as a tuition grant and twenty-five percent is paid through payroll as a stipend for the work commitment. In addition to the half-tuition assistantship many students also receive additional funding.

Students admitted into the Master of Fine Arts Program receive assistantships, which provide a full-tuition grant (less any New York State TAP eligibility) and a stipend for the academic year. Graduate assistants are required to serve as teaching assistants or provide administrative support to fulfill their award obligation. Students must be enrolled full-time to receive the assistantship.

Upon a successful review of the application for admission, graduate students admitted to the School of Engineering initially receive a work stipend assistantship. After acceptance, students may be considered for additional assistance as opportunities become available through various faculty research contracts and grants or teaching assistantship. This additional assistance may be additional work assignments and/or tuition assistance. Tuition assistance may range up to full-tuition with an annual stipend. These opportunities are determined by the individual faculty members based on a student's background and expertise in light of a particular research project's available funding and needs. Assistantship activity in the School of Engineering is coordinated by the graduate program director.

War Memorial Graduate Scholarship

This award provides the income from an endowment, approximately \$500 per year, to be awarded to an Alfred University graduate who will attend the Alfred University Graduate School full-time for an academic year. Eligible students may indicate their interest to the Student Financial Aid Office. Awards are based on need and academic performance. An attempt is made to rotate the award among the various programs in the Graduate School.

Marguerite A. Coughlin Endowed Scholarship

This award provides a partial tuition grant to a part-time education graduate student. Eligibility criteria require applicants to be enrolled in a Master of Science in Education degree program, seeking state certification, a resident of Allegany or Steuben County, New York, currently employed as a teacher, and committed to teaching as a career. Need for assistance is also considered. Application may be made by contacting the Director of Student Financial Aid by April 15 of each year.

Tuition Grant

A limited amount of Tuition Grant is available each year for students with extenuating circumstances and emergency needs. Modest awards are generally made for specific circumstances and are not usually carried as a continued commitment. An application for consideration, by letter, should be directed to the Director of Student Financial Aid.

Federal Loan and Work Opportunities

Graduate students are eligible to apply for federal financial aid coordinated by the Alfred University Student Financial Aid Office. The following programs are available:

Federal Stafford Loan (FSL)

Source: Private Lender/Federal Government
Processed by: Alfred University

The Stafford Loan is available to students who are U.S. citizens or permanent residents and matriculated in a degree program for at least six credit hours per semester. Graduate students may borrow up to \$18,500 per year.

The FSL Program makes two types of loans available to students: a subsidized loan and an unsubsidized loan. Subsidized Stafford Loan eligibility of up to \$8,500 per year is based on financial need as determined by the federal need analysis methodology. When a student qualifies for a subsidized loan, the federal government makes the interest payment on behalf of the student while the student is enrolled in school for at least a half-time basis and for six months afterwards (grace period).

Graduate students who do not qualify for any or the full-subsidized loan may receive the difference between \$8,500 and their subsidized loan eligibility as an unsubsidized Stafford Loan. The annual amount available for the unsubsidized loan is \$18,500 less any subsidized Stafford Loan eligibility. Total Stafford Loan plus other aid may not exceed the cost of attendance.

Under the unsubsidized loan, the student is responsible for making the interest payments while enrolled in school. There are two ways available to students to accommodate the interest charge during enrollment. Students may make monthly or quarterly payments to the lender, or the student and lender may agree to add the interest due to the principal of the loan (this is called capitalization).

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The interest rate for the Stafford Loan Program is currently a fixed rate set at 6.8%. For both the subsidized and unsubsidized loan, principal and interest repayment begins six months after the student graduates, terminates attendance, or drops below six credit hours. The repayment period is generally fixed at ten years. However, it may be lengthened beyond that time through a process called consolidation.

The Student Financial Aid Office, according to federal guidelines, determines eligibility for the FSL. Students may borrow the amounts indicated on their Award Notice. To receive the loan, students must complete the Free Application for Federal Student Aid (FAFSA), and a Federal Stafford Loan Master Promissory Note.

Federal Perkins Loan

Source: Federal Government/Alfred University

Awarded by: Alfred University

The Perkins Loan is a federal loan program available to matriculated undergraduate and graduate students with financial need who are U.S. citizens or permanent residents carrying at least six credits per semester. Interest and principal repayment begins nine months after the student ceases to be enrolled at least half-time (six credits). The interest rate on the Perkins Loan is 5%, and repayment may extend up to ten years, depending on the amount borrowed. Including undergraduate Perkins Loans, students may borrow up to \$40,000 for graduate study.

Funds are limited and awarded first to students demonstrating the greatest financial need. Generally, only full-time graduate students not receiving assistantships during the year will be considered for the Perkins Loan. The average award at Alfred University is \$1,000 per academic year.

To apply, students must complete the Free Application for Federal Student Aid and the Alfred University Financial Aid Application.

Federal College Work-Study (CWS) Program

Graduate students who demonstrate financial need who are U.S. citizens or permanent residents are eligible to participate in the CWS Program.

Administered by the Student Financial Aid Office, annual awards are based on financial need. The average award is \$1,000. CWS employees work 5-10 hours per week during the academic year usually at minimum wage.

As funds are limited, generally only full-time graduate students not receiving assistantships with work assignments during the year will be considered for the CWS Program.

New York State Grants/Scholarships

New York State Tuition Assistance Program (TAP)

Full-time graduate students who are New York State residents and demonstrate need, as determined by the TAP analysis, may be eligible to receive up to \$550 per academic year for up to eight semesters of enrollment. To apply students must file the Free Application for Federal Student Aid and the Express TAP Application (ETA).

Other New York State Aid Programs

New York State has several other aid programs for students in specific programs of study, who are New York State residents. For more information, contact the Student Financial Aid Office or HESC, Student Information, Albany, NY 12255; www.hesc.com.

Assistantship/Fellowship Application Procedures

All New York State residents applying for University assistantships and fellowships are required to apply for a NY State Tuition Assistance Program (TAP) award.

Assistantships and Fellowships

Activity for assistantships and fellowships is coordinated through the Alfred University Office of Graduate Admissions and the appropriate academic departments. The individual academic departments make specific award decisions.

Generally a completed application for admission and the student’s subsequent acceptance will initiate consideration for a University funded assistantship. However, procedures can vary among the academic departments.

Any necessary application criteria or special requirements regarding assistantship funding will be communicated to students by the academic departments or the Office of Graduate Admissions.

Federal and University Funding

Application for and the awarding of federal need-based aid and University funds is coordinated through Alfred University’s Student Financial Aid Office.

Graduate students wishing to be considered for University and federal aid (Stafford Loan, Perkins Loan, and Work-Study) are to complete a Free Application for Federal Student Aid, and the Alfred University Financial Aid Application.

Academic Eligibility for Student Aid

The chart below shows the minimum standards for satisfactory academic progress which must be met before a graduate student may be certified eligible to receive any federal or state aid payments (TAP, Stafford loan, etc.). Readmitted students or others with questions concerning eligibility should consult their Program Director if they feel they cannot meet the levels of progress required.

Graduate Degrees

Payments	1	2	3	4	5	6	7	8
Minimum Hours Earned	0	6	12	21	30	45	60	75
Minimum G.P.A.	0	2.0	2.5	2.75	3.00	3.00	3.00	3.00

A copy of the full satisfactory academic progress policy is available upon request at the Student Financial Aid Office.

Please note that this level of academic progress is not sufficient to guarantee that Graduate Scholastic Standards Committees will also approve of the student’s progress and not take action. See the statements on grade point average and Academic Status under the heading “**Academics.**”

Athletics

Athletics are an integral part of campus life. A wide-ranging program of intercollegiate competition, intramural sports, and recreational activities satisfies students' individual athletic aspirations.

Indoor Facilities

McLane Physical Education Center is the hub of athletic activities. It has two regulation size basketball courts, a swimming pool, a complete fitness center (with over 40 pieces of equipment designed to promote cardiovascular fitness as well as strength training equipment, including bikes, stair-climbing and rowing machines, treadmills, ellipticals, an upper body exerciser, a Gauntlet Stairmaster, twenty Cybex Eagle strength training stations, free weights), two racquetball and squash courts, four badminton and volleyball courts, and a comprehensive athletic training room. Supplementing these facilities are an indoor track and a basketball court in the adjacent Davis Gym.

Outdoor Facilities

Outdoor facilities include Merrill Field (home of the Saxon football, lacrosse, and soccer teams); a multipurpose artificial surface accommodating intercollegiate sports, intramural activities and recreation; six tennis courts; several basketball courts; a portable volleyball and basketball court and a pavilion. All are located near the residence halls. Downhill and cross country skiing, and horseback riding areas are located a short distance from campus.

Recreation and Leisure Sports

The philosophy of the recreational program is to contribute to the physical, social and emotional well being of the University community by offering a diverse program of leisure time activities. All indoor and outdoor facilities are available for the intramural program and for general student use. With a focus on participation in competitive physical play, the program is open to the entire University community (undergraduate and graduate students, faculty, and staff).

The Recreation and Leisure Sports department offers sports activities in sixteen areas, eight of which are co-educational. Offerings include tennis, flag football, indoor soccer, box lacrosse, basketball, bowling, badminton, racquetball, table tennis, volleyball, team handball, handball, inner-tube water polo, ultimate frisbee and softball. University community members take part in exercise and recreational activities. McLane Center is open daily for swimming, squash, racquetball, handball or fitness training

Campus Center

The 60,000 sq. ft. Arthur and Lea Powell Campus Center was first occupied in the spring semester of 1994. One of the finest community-gathering facilities in the country, it features a cafeteria-dining room with panoramic hillside views, a forum/movie theatre, an "open air" food court, a night club, student organization offices, a multi-cultural center, different types of meeting rooms, a formal Alumni Lounge, the University bookstore, TV and radio station, and TV lounge.

Robert R. McComsey Career Development Center at the Allen Steinheim Museum

The CDC provides career education, development and skills to AU students and alumni. We encourage students to get involved as early as their freshman year by meeting with a career counselor or advisor to begin working on internship, job and/or graduate school preparation. The CDC offers the following services:

- Career counseling, exploration and advising including career assessments
- Saxon Joblink, our web-based system for job and internship posting, web resumes, and on-campus recruiting
- Computer lab with internet access and a laser printer for student use
- Internships, co-ops and summer jobs in your field of study
- An annual spring Career Fair and an annual autumn Graduate School Fair
- CHOICES, a computer guidance program designed to identify career opportunities, graduate schools and scholarship programs
- On-campus recruiting, interviewing and resume referral
- Frederick W. Gibbs Career Resource Library including career information, job and internship postings, and graduate school information

Counseling and Student Development Center

The Counseling and Student Development Center (CSDC) is located in the north wing of the Crandall Center for Counseling and Health Services, near the Saxon Inn. The CSDC, a component of Student Affairs, provides a comprehensive range of counseling, consultation, and educational services to promote the personal development and success of University students. These services are provided by National Certified Counselors and are completely confidential in accordance with standards set by the American Counseling Association.

All assistance at the Counseling and Student Development Center is free and available to currently enrolled undergraduate and graduate students. Appointments can be arranged by calling (607) 871-2300 or by stopping by the office.

Cultural Facilities and Events

Art Galleries

The Robert Turner Student Gallery is operated by students for students. The Student Gallery Committee reviews proposals for exhibitions, controls a budget, produces publicity, and organizes receptions.

The Fosdick-Nelson Gallery provides a vital opportunity for students to see art while attending school in Alfred. During the academic year the gallery mounts a series of solo and group exhibitions that include work by national and international artists representing a wide range of ideas, media and interest. Exhibitions in the recent past include solo installations by Fred Wilson, and Kiki Smith; large-scale works by Ann Hamilton and Xu Bing were included in thematic exhibitions. Every spring, the Fosdick-Nelson hosts a series of graduate student, M.F.A. Thesis Exhibitions. Plans for renovating the gallery are currently underway. A renovation is scheduled to be completed by the Spring of 2003. All Fosdick-Nelson exhibitions, gallery lectures, and opening receptions are free and open to the public.

The Schein-Joseph International Museum of Ceramic Art

The museum was formally sanctioned in 1991, comprised of collections that had begun to be gathered as early as 1900 when the New York State College of Ceramics was established. The Museum collects, preserves, conserves, and exhibits significant ceramic and glass objects relating to both art and technology for aesthetic and educational purposes. While the permanent collection numbers in the many thousands of objects, temporary exhibits are also displayed in order to give the students and visiting researchers and tourists the opportunity to view a wide variety of ceramics made by diverse cultures worldwide. Outstanding collections that belong to the Museum of Ceramic Art include the Krevolin Collection of Pottery from the Ancient Americas, the Fox Collection of Korean ceramics, the Silverman Glass Collection, the "Gloryhole" Collection of M.F.A. graduate student work, the Visiting Artists Collection, the Chow Collection of Ancient Chinese Ceramics, and the Corsaw Collection of Functional American Ceramics, to name just a few. The Museum is open throughout the year as a valuable resource for the students and visitors to Alfred University.

Cultural Events and Films

Several campus organizations sponsor appearances by visiting artists, speakers and groups. The Student Activities Board (SAB), the Residence Hall Council (RHC), and individual academic divisions invite lecturers and performing and visual artists to campus for residencies and one-night appearances. Alfred University student groups sponsor a number of popular entertainers in the Coffeeshouse and Comedy Club, as well as rock concerts by well-known performers.

Current movies run on weekends in our state of the art theater. During the week different academic courses screen films that are open to all students. The Student theater and dance productions, as well as performances by musical ensembles, occur at frequent intervals throughout the year.

Dining

The University operates four dining facilities on campus. Two of the four facilities, Ade Hall and the Powell Campus Center Dining Hall, serve breakfast, lunch and dinner. These two dining halls primarily serve Alfred University students on a University meal plan (see below), but may be used by others on a cash basis for single meals.

The other two dining facilities, the Li'l Alf CyberFresh Cafe, located in the Powell Campus Center, and MidKnight Express located on the ground floor of Ade Hall, feature fast-food, a la carte entrees and daily lunch specials. The Cafes are open for both early morning and late night customers and operate on a cash or dining dollars basis.

Meal Plans

Meal plan options permit students to choose from a variety of block-style plans. Each option contains a specified number of meals that can be used by the dining plan member in the dining halls throughout the entire semester, in addition to a dining dollars account that can be used in Dining Services cash operations including Li'l Alf Cafe, MidKnight Express snack bar, and vending machines. Information about meal plans is available at the Dining Service Office, Ade Hall (607) 871-2247.

Health Services

The Crandall Health Center (CHC) is located in the south wing of the Crandall Center. It is made up of a multi-disciplinary team of physicians, nurse practitioners, physician assistants, registered nurses, and administrative support personnel. CHC focuses on acute care, out-patient services and preventive health care for all currently enrolled students.

Facilities and services include examining/treatment rooms, laboratory services, gynecological exams and general health counseling. Emergency care is available during the hours that the center is closed through the on-campus rescue squad, the village ambulance service, or local hospitals.

There are no charges to see the health care providers at Crandall Health Center. Nominal charges are made for lab tests, injections, some equipment, and medications. Students who require a specialist are referred to the general hospitals in Hornell or Wellsville. Students maintain the right to choose a health care provider or place for hospitalization and must assume all financial obligations for off-campus health.

Health Education programs are available to students and the campus community on topics of health, sexuality, and lifestyle choices. Programming may be in the form of individual or group sessions, outside speakers, seminars, classroom presentations, conferences and an annual Health Fair.

Immunization Requirements

Students born after December 31, 1956 must provide written documentation of immunity to measles, mumps, and rubella, as required by New York State Public Health Law 2165. Students who do not comply will be withdrawn from the University and will not be able to attend classes. Questions regarding this requirement or any other aspects of student health services may be directed to the Crandall Health Center at (607) 871-2400.

Health Insurance

Alfred University requires students to show proof of health insurance. Students are billed for the University's student accident and illness insurance plan that helps pay for hospital and specialist medical and/or surgical care. Any student (with the exception of most international students) may submit a waiver to remove that charge from their bill by providing proof of other coverage. Further information concerning student insurance through Alfred University is available by contacting the Student Affairs office or going online to www.academichealthplans.com/alfred.

Housing

Housing for graduate students is very limited, but graduate students who wish to explore options should contact the Residence Life office at 607-871-2186.

International Programs Office

The Alfred University International Programs Office assists international students with any issues or problems they may encounter while in the United States. They sponsor the International Student Orientation and advise the International Students Association.

International students are encouraged to share questions or concerns with fellow students, faculty members, their advisor, or any of the advisory staff that works with international students. The International Programs Office is located in Perlman Hall and can be reached at 607-871-2269.

Judicial System

The University has an established student judicial system. University men and women are expected to conform to high standards of adult behavior, both on and off campus. Judicial action will be taken against students whose conduct adversely affects the University community and/or the pursuit of its objectives. Violations of University policies and procedures are brought to the attention of the Judicial Coordinator. The judicial system deals with disruptive or nonproductive behavior with emphasis placed on education and personal development. (A detailed statement on the judicial system can be found in the Student Life – Policies and Procedures hand book available throughout the campus, or can be accessed through the Alfred University web page: www.alfred.edu/academics/html/policies.html.)

The University Ombudsman is available to students for consultation on matters of concern. Also, a seven-person Student Grievance Committee considers any specific grievances against or criticisms about members of the faculty and administration, and attempts to resolve them. The Student Senate selects one student from each division of the University and the faculty elects one faculty member. The Ombudsman is chair of the committee. (For further information refer to Student Life – Policies and Procedures)

Parking

Campus parking is restricted and student motor vehicles must be registered with the Safety Office at the time of registration for classes or as soon as the vehicle is brought to Alfred. Registration is for the academic year or remaining portion thereof. Commuters from outside the village and students living in University dormitories will be assigned certain parking areas and pay a fee. It is the obligation of students to acquaint themselves with the regulations, fee schedule and fine schedule available in the office of the Director of Safety. The regulations, fees and fines are subject to change from time to time.

Religious Life

The University is non-sectarian. In accordance with its century-and-a-half tradition, it extends a welcome to people of diverse ethnic and religious backgrounds. The Alfred community has ample opportunities for students to find a religious center. The Melvin H. Bernstein Hillel House and several Protestant campus fellowships offer on-campus programming and services. St. Jude's Catholic Campus Center is located within walking distance of campus and provides a wide variety of activities for Catholic students. Protestant students will receive a warm welcome at any of the numerous churches and religious groups in the Alfred area, including within five minutes of the campus: Methodist, Pentecostal, Union University, Seventh Day Baptist, and Society of Friends. Muslim students can also arrange with Muslim faculty for prayer services during Holy seasons, or can attend regular services within an hour's distance of Alfred.

Services for Students with Disabilities

Special Academic Services provides support services, consultation, and advocacy for students with learning, physical, and/or psychological disabilities. Services for persons with disabilities shall complement and support, but not duplicate, the University's regular existing services and programs. The University strives to provide equitable and efficient services to all students.

Assurance of equal educational opportunities rests upon legal foundations established by federal law, specifically Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. By federal law, a person with a disability is a person who:

- 1) Has a physical or mental impairment;
- 2) Has a record of such impairment; or
- 3) Is regarded as having such an impairment that it substantially limits one or more major life activities such as self-care, walking, seeing, hearing, speaking, breathing, or learning.

Alfred University is dedicated to providing full access to all of its facilities, student programs, activities, and services, and reasonable accommodations in the instructional process, in compliance with these guidelines. Services that the University provides are designed to maximize independence and encourage the integration of students with disabilities into all areas of college life.

Student Identification Cards

The University provides identification cards for all students. ID cards are required for charging books from the library, for participation in the dining centers' board plans, for cashing checks on campus, for admission to campus events and facilities, and for security purposes and positive identification on campus and elsewhere.

All students may obtain their ID cards at the Dining Services Office, Ade Hall. There are designated ID hours at the start of each semester, or you can make an appointment by calling (607) 871-2247.

Transportation

Alfred is reached by east-west I-86/route 17 (Southern Tier Expressway-- Exit 33, Almond) and from the north and south by routes 390, 15, 16, 19, 21, 36 and 88.

Major airlines serve Rochester, Buffalo and Elmira. Hornell and Wellsville can accommodate private aircraft.

The Shortline Bus Company services Alfred three times a day from New York City, for the daily schedule call the Alfred ticket office at (607)587-8842 or (800)631-8405. The New York Trailways Bus Company also services the local area. To find out more about their daily schedule contact their Hornell office (607)324-0305 or (800)295-5555.

Campus Policies/Regulations

Campus Safety Report

The Campus Safety report is available to all members of the campus community and the public. The report contains University policies related to campus safety including: University Safety and Security Department policies and procedures, policies concerning alcohol and drug use, crime awareness and prevention, the reporting of crimes, and sexual misconduct. The report also includes a three-year summary of statistics of crimes that are reported to have occurred on University property, in off-campus buildings owned or controlled by the University, and on public property within the Village of Alfred. A copy of this report can be obtained from the Student Affairs Office, the Admissions Office, or the Human Resources Office, or by accessing the University web site:

[www.alfred.edu/academic/html/policies.html]

Consumer Complaint Procedure

In New York State, a complaint may be filed by any person with reason to believe that an institution has acted contrary to its published standards or that conditions at the institution appear to jeopardize the quality of the institution's instructional programs.

I. Institutional Procedure

Complaints can be initiated for both academic and non-academic concerns related to a belief that the institution has acted contrary to its published standards, or that conditions at the institution appear to jeopardize the quality of the institution's instructional programs. The process for filing these complaints follows the unit's organizational hierarchy. The written complaint is filed with the head of the academic or administrative unit in which the complaint originated.

If the complaint is not resolved to the satisfaction of the complainant, it continues to be filed using the organizational hierarchy until a satisfactory resolution has been reached. If a satisfactory resolution cannot be reached using this Institutional Procedure, the complaint may be filed with the New York State Education Department, Office of Higher Education.

II. New York State Education Department Postsecondary Complaint Procedure

The Office of Higher Education handles only those complaints that concern educational programs or practices of degree-granting institutions subject to the Regulations of the Commissioner of Education. The Complaint Form may be accessed at <http://www.highered.nysed.gov> or from the Student Affairs Office.

The Office of Higher Education does not intervene in matters concerning an individual's grades or examination results, as these are the prerogative of the institution's faculty.

The Office does not handle complaints concerning actions that occurred more than five years ago.

A complaint involving discrimination against enrolled students on the part of an institution or faculty, or involving sexual harassment, should be filed with the U.S. Office of Civil Rights, 75 Park Place, New York, NY 20007.

A complaint involving consumer fraud on the part of the institution should be directed to the Office of the New York State Attorney General, Justice Building, Empire State Plaza, Albany, NY 12223.

Hazing Policy

Alfred University believes that any group or organization composed of students, faculty, staff and/or visitors has the responsibility to create an environment within which all activities are pursued in a sound and productive manner. Any group or organization which includes hazing as part of its activities creates a risk of hazardous conditions.

Alfred University defines hazing as “any activity or action which subtly, flagrantly, recklessly, or deliberately demeans, embarrasses, threatens, invites ridicule or draws inappropriate or negative attention to a member, affiliate, or group, and/or an attitude which implies one member/affiliate is superior to another or that membership in the group must be earned through personal services or meaningless activities. Furthermore, this definition includes any action which results in the impairment of academic performance or causes failure to properly fulfill obligations to University-sponsored groups and organizations.”

Alfred University unconditionally opposes any form of hazing. Any violation of this policy should be reported immediately to the Office of the Dean of Students. Any member or affiliate who is in violation of this policy is subject to suspension, expulsion, or other judicial proceeding, or, if the violator is a group or organization, rescission of affiliation with Alfred University.

Furthermore, New York State defines hazing as follows: “A person is guilty of hazing in the first degree when, in the course of another person’s initiation into or affiliation with any organization, he intentionally or recklessly engages in conduct which creates a substantial risk of physical injury to such other person or a third person and thereby causes such injury.” (Penal Law S120.16) Hazing in the second degree (a violation) incorporates a nearly identical definition except that no actual injury to any person need to be proven. (Penal Law, S120.17)

Weapons Policy

Students are prohibited from keeping firearms, air guns, BB guns, bows and arrows, spear guns, and other dangerous and illegal weapons, explosives of all sorts including gunpowder, firecrackers and ammunition on University property. The University will provide accessible, safe storage for all personal legal weapons and ammunition brought to campus (in the case of pistols the appropriate permit must be exhibited) under the following conditions:

- a) On arrival the student must register his/her weapons with the Security Office and will be advised of rules and regulations at that time. This registration is subject to the approval of the Security Office and the administrator in charge.
- b) At any time during open hours the student may check out such weapons and ammunition as s/he wishes by substitution of his/her weapon card for the weapons.
- c) The above weapon card constitutes the only authorization to possess a weapon on University property under New York State Law, for the purpose of participating in these activities. It is assumed that the student has only authorization to transport his/her weapons and ammunition directly to the storage area from either ranges or hunting fields.
- d) Failure to register a weapon and/or follow regulations may result in judicial action by the University and/or referral to civil authorities.

Graduate Degree Programs

Alfred University grants graduate degrees at the master's and doctoral levels. Two post-master's certificates of advanced study are offered. These programs of study and degrees are offered:

Art

Master of Fine Arts

- Ceramic Art
- Electronic Integrated Arts
- Sculpture/Dimensional Studies (with concentration in glass art or sculpture)

Business Administration

Master of Business Administration

Community Services Administration

Master of Professional Studies

Counseling and School Psychology

Master of Science in Education/Certificate of Advanced Study

- Counseling

Master of Arts/Certificate of Advanced Study

- School Psychology

Doctor of Psychology

- School Psychology

Education

Master of Science in Education

Literacy Teacher

Engineering and Science

Master of Science

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

Doctor of Philosophy

- Ceramics
- Glass Science
- Materials Science and Engineering

Credits, Grades and Grade Point Average (GPA)

Grading in graduate courses (except for thesis/project credit and all courses offered by the School of Art and Design) is as follows:

Grade	Grade Points per Semester Hour	Meaning
A	4.00	Superior
B +	3.50	Very Good
B	3.00	Good
C	2.00	Average
F	0.00	Failure
I	0.00	Incomplete

The grade of “I” indicates incomplete course work due to circumstances beyond the student's control. The grade of “I” shall be changed to F by the Registrar if not removed within the succeeding semester. Under extenuating circumstances the instructor may request an extension of the time for the removal of the “I” grade.

In graduate art and art history courses, the only final grades assigned are HP (High Pass), P (Pass), or NC (no credit). A grade point average is not computed for these courses.

Thesis and Project credits are reported using the grades P (Pass) or NC (No Credit).

The grade of IP (In Progress) may be given for thesis, project, and seminar courses when the work extends by design over multiple terms. The IP indicates that work is in progress a grade will be given in the future.

Auditing of Courses

A student may elect to take a course on a non-credit or “audit” basis. The student may also change from credit to audit or vice-versa until the last day to withdraw from the course as designated in the Academic Calendar. An auditor receives a grade of “AU” in the course, and this is recorded on the transcript. Courses audited are charged at 50% of the normal tuition rate.

Any student registering as an auditor in a class must consult the instructor to determine the level of participation the instructor expects of an auditor. If any auditing student fails to meet the expected level of participation, the instructor will notify the Registrar at the end of the term, and the Registrar will drop the student's registration in that class.

Calculating the Grade Point Average (GPA)

Only credits attempted at Alfred University which have received final grades of A through F shall be used to calculate GPA. The term GPA is calculated by dividing the total grade points earned by the “GPA Hours” for that term. The cumulative GPA shall be calculated by dividing the total grade points earned at the University by the GPA hours. Courses completed with grades of HP, P and A through C will be counted as credit earned. Courses with grades of W, I, NC, IP, F, and AU will not be counted as credit earned.

Repeating of Courses

When a course is repeated, the course value shall be used only once and the grade points corresponding to the last grade earned shall be used in calculating the cumulative grade point average. While the original grade is no longer used in the GPA, it remains a part of the record and it appears on the student's transcript.

Transfer Credit

No more than 6 graduate semester credit hours may be transferred to the master's degree (except for the M.F.A. degree program, in which no transfer credit is permitted). Students who enter the doctoral program with advanced standing (a master's degree in the field) must complete at least 50% of their credits for doctoral coursework at Alfred University. Acceptance of transfer credit is the prerogative of the director of the particular graduate program. Additional restrictions may apply in specific programs.

Change of Grade

A grade may be changed by the instructor of a course to convert an Incomplete or IP to a final grade or to correct an error. The Division Chair and appropriate Dean must approve all grade changes except for completion of work in courses graded I or IP.

Classification of Students**Full-time Student**

An enrolled student currently registered for 12 or more semester credit hours.

Part-time Student

An enrolled student currently registered for fewer than 12 semester credit hours.

Degree-seeking Student

Admitted to the Graduate School and enrolled in a program in which the student anticipates earning a degree.

Unclassified (non-degree) Student

Not admitted to the Graduate School or seeking a degree at AU. Non-degree students:

- May complete no more than nine credit hours without applying for admission to a graduate program
- Must be admitted to the Graduate School at least 24 semester hours prior to graduation

Graduation Requirements

All work done in satisfaction of the requirements of an Alfred University master's degree must be completed within a period of six consecutive calendar years.

No more than six semester credit hours used to satisfy the requirements of one master's degree program may be used to satisfy the requirements of another.

A written application for the conferring of an advanced degree must be made to the Registrar at the Student Service Center at least 60 days before the expected graduation date. Graduation and the awarding of any degree depends upon the satisfactory completion of the course of study prescribed by the degree program elected. The University reserves the right to withhold the diploma for poor scholarship or for other reasons. The detailed requirements for each program of study are found in the "Degree Programs" section beginning on page 45.

Graduate Academic Status

The Graduate School reserves the right to deny further registration to any student who is not making satisfactory progress. Course work presented in satisfaction of requirements for a degree must be an average grade of B or better (3.00 GPA). Scholastic Standards committees will review every student's record each semester. They may recommend termination of graduate study for students who do not meet a GPA standard of 3.00 or better each semester and cumulatively or who do not make satisfactory progress in other ways.

Students aspiring to the degree of Doctor of Philosophy, Doctor of Psychology, or Master of Arts in School Psychology are permitted to present no more than six credit hours at the grade of C.

Any student who fails a qualifying or comprehensive examination for the second time is automatically dropped from the Graduate School for academic failure.

Student Appeal for Change of Academic Status

A student appeal for change of academic status will be made through the student's Dean for presentation to the Program's Scholastic Standards Committee. If the matter cannot be resolved by the Scholastic Standards Committee, the student may appeal to the Provost, or Chief Academic Officer, who may consult the Graduate Council, in reaching a decision.

Registration, Scheduling and Attendance

Any degree-seeking student in attendance during the previous semester who does not complete his/her registration during the period designated by the Academic Calendar will be considered a late registrant. A late registrant should complete registration as soon as possible. Late registrants may be subject to a late registration fee.

Advisor approval is required for each student's schedule or study plan each term. Graduate students may also need the approval of the Director of the program. This requirement applies to both full-time and part-time students in the degree programs.

Adding and Dropping Courses

A course may be added or dropped during the periods indicated in the Academic Calendar without penalty. Any course dropped will not appear on the student's transcript. The approval of the student's Dean is required if this course change is made after the published deadline and will only be granted in extreme cases. If granted, a \$35 late fee is assessed.

Withdrawing from a Course

A student may withdraw from a course and receive the grade of W with the signature of the lecture instructor and the approval of the student's advisor during the period designated in the Academic Calendar. A grade of W will be assigned for a course withdrawal. The approval of the student's Dean/Director is also required if the revised load for a full-time student is less than 12 semester hours. After the deadline for this type of action, a \$35 late fee is assessed.

Attendance

Regular class attendance is expected of all students. Faculty members shall establish their own regulations governing attendance and communicate such to the students. A student in a closed course who does not attend the first class meeting or communicate with the instructor or the Registrar's Office by the close of the day of the first class may be dropped from the course. It is up to the student to check with the instructor to determine if he/she has been dropped.

Withdrawal, Leave of Absence, and Readmission**Withdrawal from School**

A student who is obliged to withdraw from the University during the academic year or at the end of any semester should first consult his/her Dean or Program Director. Initiating the withdrawal in this manner is primarily for proper guidance and is also necessary if the student is to receive funds which may be due.

Readmission

A student who has withdrawn from the University or been suspended or dismissed for any reason may be granted the opportunity to return. Application for readmission must be in writing to the Director of Admission. These applications should be submitted at least one month prior to the time the student is eligible to return.

Leave of Absence

Alfred University recognizes that there are many good reasons why a student may want to temporarily interrupt his/her education. Therefore the University has established a leave of absence policy that assures a student the right to continue his/her education following a specified leave period. The following principles govern the leave of absence policy:

- A student must make a written request for a leave of absence to the Program Director or Dean. The request must include the reason(s) for the leave and the length of time the student plans to be away. Leaves are generally granted for one or two semesters, but may be extended upon application and approval of the Dean. A leave of absence will not usually be granted for a semester in progress.
- Before granting a leave the Dean may discuss with the student his/her written request and specific action plan for the leave.
- Once a leave is granted the Dean will notify other interested University officials of the decision and the expected date of return.
- There are circumstances (for example, a felony conviction) under which a student's leave, and eligibility to return to the University, may be canceled.
- A student who is granted a leave of absence to deal with medical and/or psychological problems may be requested to submit a clinical evaluation to the program director before consideration can be given for return to Alfred University.

Grades for Students Leaving School during the Semester

A student who formally leaves school during a semester will be given W grades in registered courses providing the last date to withdraw from each course as published in the Academic Calendar has not passed. In those courses where the last day to withdraw has passed, the instructor will record a final (non W) grade. In cases of special circumstances the student's Dean or Program Director can permit W grades to be recorded for any or all courses after the deadline has passed.

Academic Dishonesty (Unethical Practices)

Definition

Unethical conduct or academic dishonesty is defined as any action that enables students to receive credit for work that is not their own. Such conduct will not be tolerated in any form. Academic dishonesty can occur both in and outside the classroom, studio, or lab. In the context of tests, quizzes, examinations, or other in-class work, dishonest practices include, but are not limited to:

- Marking an answer sheet in a way designed to deceive the person correcting it.
- Possession of unauthorized material that could be used during a quiz, test, or examination for the purposes of cheating
- The unauthorized use of books or notes during a quiz, test, or examination.
- The hiding or positioning of notes or other tools for the purposes of cheating on a quiz, test, or examination
- Possession or knowledge of any examination prior to its administration.
- Looking at someone else's quiz, test, or examination without the express permission of the instructor
- Any form of communication during a quiz, test, or examination
- In the context of writing assignments, research projects, lab reports, and other academic work completed outside the classroom, dishonest practices, commonly referred to as plagiarism, include but are not limited to:
 - Lack of adequate and appropriate citation of all sources used
 - The appropriation of another's ideas, analysis, or actual words without necessary and adequate source citations, either deliberately or inadvertently
 - The copying, purchase, or other appropriation of another person's academic work with the intention of passing it off as one's own original production
 - The creation of a document by more than one student that is then submitted to the instructor as the original creation of only one student, without the express permission of the instructor
 - Submitting the same piece of work to more than one instructor without the express permission of ALL instructors involved

Guidelines for Avoiding Dishonest Behavior

The following guidelines are included to assist students in avoiding dishonest behavior in their academic work, particularly in writing assignments, research projects, and lab reports.

- A. Students' written work should reflect their own personal preparation for the assignment, such as reading books and articles, performing research on the internet and in electronic databases, and taking notes in class and during the research process.
- B. Students should avoid using the actual words of the authors of their sources whenever possible, opting instead to demonstrate an understanding of the authors' ideas by rewriting them in their own words.
- C. All ideas and analyses that are derived from other authors must be attributed to those authors in the form of appropriate source citations, even when their own words are not used. Source citations usually take the form of footnotes, endnotes, or parenthetical citations in addition to a formal bibliography and/or works cited page at the end of the writing assignment.

The format for these source citations depends on the conventions of each academic discipline: consult your instructor as to the appropriate form to use.

D. When the use of an author's specific text is unavoidable or necessary, that material must be identified as a direct quotation and must either be surrounded by quotation marks or formatted as a block quotation. Appropriate source citations must follow all quotations, as per the instructions above.

E. Circumstances when direct quotation is necessary or desirable include:

- 1) The wording of the text is essential to the student's own analysis.
- 2) The text exemplifies the author's particular perspective.
- 3) Quoting the text is a more efficient way of presenting the author's ideas than a more elaborate and lengthy paraphrase would be.

It should be noted that lengthy quotations or their overuse is neither desirable nor appropriate in most instances and should be avoided. Additionally, over-reliance on lengthy quotations can be considered a form of plagiarism.

F. Some instructors find collaborative assignments useful. Students may be allowed to collaborate in shared assignments only with the specific permission of the instructor. In those circumstances the limits to the collaboration will be established by the instructor and students should be aware that they are responsible for maintaining the appropriate limits to that collaboration.

Procedures

Graduate students at Alfred University are expected to maintain generally accepted standards of academic honesty and professional integrity. Failure to do so will lead to dismissal from the Graduate School.

Instructors who believe an unethical practice has occurred should take the following steps:

A. The instructor will advise the student orally as soon as possible after the offense is observed. This will allow simple misunderstandings and misinterpretations to be resolved.

B. If the instructor remains convinced that an offense has occurred, a written statement of the offense will be sent to the student, with a copy sent to the academic dean or graduate program director.

C. The student's academic dean or program director should advise the student of appeals procedures which are available. A student charged with an unethical practice may appeal to the appropriate program committee.

Course Numbering System

Courses offered at Alfred University are numbered as follows:

- 001–099 Courses of a remedial nature that do not carry credit toward any University degree.
- 100–199 Courses without prerequisites primarily for undergraduate students in their first year of study.
- 200–299 Courses with or without prerequisites primarily for undergraduate students in their first or second year of study.
- 300–399 Courses usually having prerequisites and offered primarily for undergraduate students in their third or fourth year of study.

400–499 Advanced courses primarily for undergraduate students in their fourth year of study.

500–599 Courses primarily for graduate students. With permission of the instructor, undergraduate seniors in good standing may enroll in these courses for undergraduate or graduate credit. (May count for graduate credit only if not required to complete the undergraduate degree.)

600–699 Advanced graduate courses open only to graduate students.

A few designated courses at the 400-level may be taken for graduate credit only by students who have been formally admitted to the Graduate School prior to the registration; permission of the advisor is required.

Accreditation

Alfred University is accredited by the Middle States Association of Colleges and Secondary Schools. It is an institutional member of the American Council on Education, the Association of American Colleges, the College Entrance Examination Board, and the Council of Graduate Schools in the United States. Because all graduate programs are specifically approved by the New York State Education Department, students who are residents of New York State are eligible for Scholar Incentive Awards. The appropriate graduate programs in Education and in School Psychology have been registered by the Education Department and recipients of such graduate degrees are eligible for the corresponding certification in New York State.

The School Psychology Doctoral Program is accredited by the American Psychological Association (APA). The Master of Arts/Certificate of Advanced Study Program in School Psychology is accredited by the National Association of School Psychologists (NASP) and offers its graduates national certification. In addition graduates of the doctoral program in School Psychology are eligible for licensure as a psychologist in New York State. The Fine Art program is accredited by the National Association of Schools of Art and Design.

Research

Members of the Alfred University faculties are actively engaged in research in many academic areas. Current research projects are supported by governmental agencies, the State of New York, and industrial sponsors. Participation in such scholarly activity is a part of the training of all graduate students, as appropriate to the program elected.

Division of School Psychology

The Division of School Psychology is well known for the continuing contributions of its faculty to the scholarly literature in psychology, school psychology, educational psychology, counseling, and special education.

Faculty in the Division work cooperatively with Master's and Doctoral students, and with faculty in other divisions and other universities. They conduct research in their areas of specialization, supervise dissertation research, direct sponsored projects, serve on the editorial boards of journals, and assist schools and other agencies with applied research and program evaluation projects.

Doctoral students in the Division of School Psychology are encouraged to participate in a scholarly apprenticeship throughout their program of study, under the direction of their advisor or other mentor. The apprenticeship is designed to introduce students to the process of scholarship and to supplement coursework in research methodology. Students are expected to become gradually more independent over the course of the apprenticeship, so that their dissertations are simply another step in the process of becoming a scholar.

The Division also has a number of resources for the support of research. The Lea R. Powell Institute for Children and Families is an organizing entity for the research, training, and service missions of the Division.

The Center for Rural School Psychology, the in-service training arm of the Institute, offers continuing professional development for current practitioners. The Child and Family Services Center (CFSC), the service entity of the Institute, is a newly renovated spacious facility with a state-of-the-art audio-visual communication/observation system. All students gain experience working in this environment of a community clinic with their work directly supervised. The Institute's Powell Development Program provides start-up funding for research projects carried out by students and faculty in the Division of School Psychology and prepares grant initiatives in collaboration with faculty.

The division, through the sponsorship of the Powell Institute for Children and Families, has received several federally funded personnel preparation training grants totaling over 1.4 million dollars. These projects have supported the training of doctoral school psychologists to take on leadership roles in working collaboratively with schools in rural areas, and in integrating services for preschool children into school functions.

Federal grant funding totaling more than 1.9 million dollars provided by the Office for Juvenile Justice and Delinquency Prevention has established the Rural Justice Institute at Alfred University. This Institute consists of faculty and professional staff representing various disciplines who develop partnerships with local agencies to provide training and community education, prevention programming in schools, and research projects related to domestic and school violence and prevention services. Doctoral students are key partners in conducting, presenting, and publishing research from the Rural Justice Institute.

The ACCESS program funded for \$500,000 through the Substance Abuse and Mental Health Services Administration established a model demonstration program of school psychology practice in rural communities that focuses on the integration of university, local school district, and community resources to meet the mental health needs of children and families in rural areas. The project consists of two components: fellowships for students who receive training in rural school psychology and the development of satellite mental health centers of the Division's Child and Family Services Center in schools serving children and families in isolated, rural areas with limited availability of mental health services. The participating school districts provide the physical space necessary for the provision of psychological services to children and families and Alfred University places advanced level student clinicians at each of the rural schools to provide individual, group, and family counseling services and parent education and support.

Kazuo Inamori School of Engineering

The faculty in the Inamori School of Engineering is well known for its contributions to various fields of science and engineering. They direct sponsored research projects, supervise undergraduate and graduate research theses, contribute to the science and engineering literature, and participate in professional engineering societies.

The School actively promotes the collaborations of its student and faculty with other science and engineering professionals. Students participate in internships and on-campus research projects sponsored by industrial organizations, national laboratories, and government agencies. Graduate students and faculty conduct experiments at national and international user facilities. Members of the faculty serve as visiting scientists and visiting professors at other research and education institutions.

Research in the Inamori School of Engineering ranges from basic science to applied engineering. In the materials programs, areas of specialization include atomic modeling; solid-state chemistry; ceramics processing and manufacturing; powder synthesis and characterization; structural and high-temperature materials; fractography; electroceramics; interfaces and composites; biomaterials; glass; photonics; and materials characterization. In the Mechanical Engineering program, areas of specialization include heat transfer, mechanics of materials, and finite-element modeling. In the Electrical Engineering program, areas of specialization include communications and control systems, thin film deposition, solid-state devices and optoelectronics. More information about the specific activities and research interests of the faculty can be found at www.alfred.edu.

The Inamori School of Engineering maintains an annual research budget of around \$ 6M. The research is sponsored by federal and state agencies, industrial organizations, philanthropic foundations, and the New York College of Ceramics. Monies received through these grants and contracts support the educational mission of the School. Many undergraduate and graduate students work on sponsored projects, gaining experience as well as financial assistance.

Several focused research and educational centers reside within the School of Engineering. The Center for Advanced Ceramic Technology (CACT) – a joint enterprise between the University, government, and industry – facilitates research and development of high-technology ceramics that possess the potential for to profit both the scientific community and the industrial base of New York State. Funded by the New York State Office of Science, Technology, and Academic Research (NYSTAR), the CACT provides matching funds for research projects sponsored by participating industries. The Center for Glass Research (CGR) is supported by a consortium of the major glass manufacturers. The Center for Environmental and Energy Research (CEER) is a multidisciplinary research effort involving university faculty, industrial partners, and state and federal partners, including the U.S. Environmental Protection Agency (EPA). Additional information regarding the mission and activities of these centers can be found at www.alfred.edu.

Research is conducted with state-of-the-art equipment housed in over 40,000 square feet of laboratory space. Major facilities are available for ceramics processing, powder characterization, x-ray diffraction, electron and optical microscopy, thermal analysis, spectroscopy and optical-properties characterization, chemical and surface analysis, electrical characterization, mechanical testing, electromechanical analysis, glass-fiber drawing, thin-film deposition (sputtering, plasma, laser, e-beam, APCVD), molecular simulation and computer modeling, molecular cloning, cell

culture, and protein engineering, and electronics design and testing (VLSI, signal processing, controls and communications). The Renewable Energy Laboratory is also equipped with a 10-kW wind turbine system mounted on a 120-foot high-guyed tower. Most graduate students have their own computers. In addition to individual and laboratory computers, there are centrally located facilities with a range of data analysis and graphic applications.

Alfred University and the College of Ceramics, along with Corning Incorporated, jointly created the Ceramic Corridor Innovation Center project and Alfred Technology Resource, Inc., a non-profit corporation community of two new buildings facilitating the start-up of new ceramic-related business enterprises.

School of Art and Design

The Fine Arts graduate programs at Alfred University, School of Art and Design are ranked in the top five nationally by *US News and World Report*. The graduate program in Ceramic Art is consistently acknowledged as number one. Alfred's ceramic artists, sculptors, painters, printmakers, photographers, video artists, designers, and art history scholars are recognized by galleries and museums worldwide. They have received numerous grants, served on major art councils and museum boards, and have traveled internationally as visiting artists and scholars. Faculty and student exchange programs exist in China, Australia, and Europe. The expertise of these men and women provides a cutting edge, as well as comprehensive education in Art and Design.

University Libraries

Herrick Memorial Library

Herrick Library is committed to providing strong, curriculum-centered collections, personal service, and state-of-the-art access to information.

Herrick Memorial Library is undergoing an extensive renovation during the 2006-2007 academic year. When the renovation is completed it will provide more public spaces for group study supported by appropriate technologies in its Learning Commons. It will provide a new space for reflection and/or discussion in its café, where new journals, books and newspapers can be enjoyed with coffee and snacks. An all-night study room will be available for use after the library itself closes, providing study space 24/7 during the academic year.

Herrick Memorial Library's web page [<http://herrick.alfred.edu>] provides round-the-clock access to the Library catalog, electronic reserves, electronic journal indexes, and specialized databases, as well as websites selected by our librarians to support student and faculty research. Herrick subscribes to more than 500 periodicals in print and provides online access to over 20,000 periodical titles. Its collection numbers nearly 250,000 items, including recreational collections of fiction, videos, and CD's.

Herrick also offers Interlibrary Loan and Document Delivery Service, which provides access to materials from other libraries and sources in the U.S. and foreign countries. Professional research support is available more than 50 hours a week, enabling library users to make the most of their research efforts.

Herrick's librarians are committed to supporting the University's educational mission; and particularly, to promoting information literacy skills.

It is the Library's goal to teach students how to effectively locate, process, organize, and utilize information. This is accomplished through course-related and individualized instruction as well as by providing research guides for specific subject areas. With the beginning of the Fall 2007 semester, Herrick will offer a combination of comfortable seating, carrels and tables accommodate a variety of studying styles and study rooms provide opportunities for group study and group project work. Special Collections and Archives, located on the top floor of Herrick Library, will offer its collections and services, by appointment, in a climate-controlled area which features an ornately decorated reading room with seventeenth century English oak paneling. The Archives provide primary source materials which document the history of the University.

Scholes Library

The Samuel R. Scholes Library, established in 1947, is a special library providing academic support for the University's statutory and nonstatutory programs in art and engineering. The Scholes Library collections are recognized internationally as a resource for information on the art, science, technology, and history of ceramics and glass. The library also has outstanding holdings in the areas of advanced materials, photography, art history, contemporary art, electronic media, graphic design, glass art, and sculpture. The collections include 66,600 books, 37,000 bound periodical volumes, 63,000 government research reports, 167,000 slides, 1200 videos, and materials in a variety of other media formats. During the academic year the library is open 96 hours per week, with extended hours during final examination periods. Professional reference service is available during most hours that the library is open. The library faculty are dedicated to providing undergraduate and graduate students with the skills they need to locate and use information effectively. In addition to providing assistance at the Reference Desk, the librarians offer group and individual instruction sessions tailored to the needs of students in art or engineering at all levels.

The library occupies a four-story building designed to provide state-of-the-art information services. Its Web page at <http://scholes.alfred.edu> provides quick links to the online catalog and many specialized indexes, text and image databases, and thousands of full-text journals available 24/7. Both of the Alfred University Libraries are full participants in the SUNYConnect initiative linking libraries on the campuses of the State University of New York into one large "virtual library," greatly expanding access to print and electronic resources for all Alfred University students.

Computers are available for student use throughout the library. Audiovisual services available to both students and faculty include classrooms equipped for slide, film, and computer data projection, an extensive visual resources facility, and AV carrels for individual viewing of materials in electronic formats. The Special Collections Room houses rare and unique materials, including a collection of artists' books, and all original theses and dissertations from the New York State College of Ceramics.

The College Archives preserve historical documents and photographs relating to the history of the College; also located here are the Archives of the National Council on Education for the Ceramic Arts (NCECA). Under the supervision of a trained archivist, this facility serves as a resource for scholars researching the history of American ceramics.

Technology Resources

Alfred University is committed to providing a campus computing environment where technology is fairly and equitably distributed in support of the University's educational mission.

Our ultimate goals for the use of information technology are to prepare students for an information-based workplace, enabling them to seek, organize, analyze, and apply information and associated technologies appropriately; to provide anytime/anywhere learning opportunities for students and faculty; to enrich the learning environment; and to improve productivity and cost-effectiveness where possible and practical.

The University has a multi-million dollar 100 Mbps network that provides internet access to every residence hall room, classroom and office on campus 24 hours per day, 7 days per week. The network backbone was installed with Gigabit fiber in anticipation of meeting future needs. In addition, the University has embarked on an aggressive computer upgrade initiative, replacing servers, computers in residence halls, student labs and faculty offices in an on-going 3-year cycle.

The University uses a variety of approaches in making computers available to students. General and specialized computing labs are located throughout the campus providing access to Windows, Macintosh, Linux or UNIX operating systems. Laboratory computers are pre-configured with Microsoft Office Professional desktop software, FireFox, and Microsoft Internet Explorer. Specialized software such as SPSS, MathCad, Visual Basic, C++, Adobe PhotoShop, etc. are available in a number of lab settings. Every residence hall on campus has a computer room.

Wireless network access is available in the libraries, Powell Campus Center, most academic buildings and a large portion of the residence halls; additional sites are being added as funds become available. AU students, faculty and staff have unlimited access to these services at no charge. Email, file storage space and personal web page hosting services are also provided free of charge.

The University's two libraries make their catalogs and a wide variety of electronic databases and information resources available through their well-developed Web Pages. This means that students, faculty and staff can access research information from any place with Internet access at any time of day or night.

Students may borrow laptops (PC or MAC) through ITS equipment lending in Allen hall. This program enables students with short-term computing needs to borrow a laptop for use anywhere on or off campus.

Alfred University provides a wide range of Web communication resources, including Blackboard learning management system, Alfred Today, and the student Web portal, which support student academic, extracurricular, and social life.

Students can now register for classes through the on-line BannerWeb process. They can review their grades, check their student account, and print off their class schedule to name just a few of the features that Banner now provides.

The AU Information Technology Help Desk provides service-oriented support for campus technology needs and also offers a learning laboratory experience for students through its Student Technology Assistants (STA) program.

Religious Beliefs and Class Attendance

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

- Any student who is unable, because of religious beliefs, to attend classes on a particular day or days shall, because of such absence, be excused from any examination or any study or work requirements
- It shall be the responsibility of the faculty and of the administrative officials of each institution of higher education to make equivalent opportunities available to any student absent from school because of religious beliefs, to make up any examination, study, or work requirements which might have been missed because of such absence. No fees of any kind shall be charged for making such equivalent opportunity available
- If classes, examinations, study or work requirements are held after 4:00 p.m. on Friday, or on Saturday, similar or makeup classes, examinations, study or work requirements shall be made available on other days, where it is possible and practicable to do so, and no special fees shall be charged for these.

In carrying out the provisions of this section, it shall be the duty of the faculty and of the administrative officials to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to any student because of availing him/herself of the provisions in this section. Any student who is aggrieved by the alleged failure of any faculty or administrative official to comply in good faith with these provisions shall be entitled to maintain an action or proceedings in the supreme court of the county to enforce his/her rights under this section.

Student Rights under the Family Educational Rights and Privacy Act

The Family Educational Rights and Privacy Act of 1974, as Amended (FERPA) affords Alfred University students certain rights with respect to their education records. These rights are:

1. The right to inspect and review their education records within 45 days of the day the University receives a request for access. Students should submit to the registrar, dean, division chair, or other appropriate official, written requests that identify the record(s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.
2. The right to request the amendment of those education records believed by the student to be inaccurate or misleading. Students should write to the University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is believed to be inaccurate or misleading. If the University official responsible for the record decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment.

In the same notification, the University will also advise the student of procedures for a hearing. Insofar as possible, the services of the University Ombudsman and the members of the Ombudsman's Student Grievance Committee will be used in these instances.

3. The right to consent to disclosures of personally identifiable information contained in their education records, except to the extent that FERPA authorizes disclosure without consent. Disclosure without consent may be made as follows:
 - To school officials with legitimate educational interest. A school official is a person employed by the University in an administrative, supervisory, academic or research, or support staff position (including Security and Health Center personnel); a person or company with whom the University has contracted (such as an attorney, auditor, or a collection agent and, specifically, the National Student Loan Clearinghouse and, for those students purchasing health insurance through the University, Academic Risk Management); a person serving on the Board of Trustees; or a student serving on an official University committee charged with a task that involves review of education records, or assisting another school official in performing his or her tasks. A school official has legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.
 - To parents of dependent students.
 - In connection with financial aid.
 - To Federal State, and local authorities in connection with an audit or evaluation of compliance with education programs.
 - To organizations conducting studies for or on behalf of educational institutions.
 - To comply with a judicial order or subpoena. (In most cases, the University must make reasonable effort to notify a student in advance of compliance.)
 - In connection with a health or safety emergency.
 - To an alleged victim of a crime of violence, the University may release the results of a related judicial hearing. If the charges involve sex offenses (forcible and non-forcible), the student bringing the charges as well as the student charged will be informed of related judicial hearing results.
 - To the student.
 - To the public, at the discretion of the University, those portions of education records defined as "Directory Information." Note, however, that students may request that the University withhold Directory Information.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Alfred University to comply with the requirements of FERPA. The name and address of the office that administers FERPA are:
 - Family Policy Compliance Office
 - U.S. Department of Education
 - 600 Independence Avenue, SW
 - Washington, DC 20202-4605

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, glass art, or sculpture.

This two-year program is highly competitive; only eight ceramic art, four electronic integrated arts, two glass art and three sculpture students are admitted annually. Each accepted M.F.A. candidate is given a financial stipend, either as a teaching assistant or as an intern, within the Art and Design program.

In addition to studio work, all graduate students take a series of seminars, art history, elective credits and technical classes relevant to their area of study.

In the final year, students write a thesis report and present a M.F.A. exhibition in the School of Art and Design's Fosdick-Nelson 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 preparation in the appropriate areas. Applicants to the Ceramic Art program must submit (20) twenty 35 mm slides. Applicants to the Electronic Integrated Arts program may submit slides, CD-ROMS, DVDs or cued videotapes. Applicants to the Sculpture/Dimensional Studies program may submit slides, CD-ROMS or DVDs. All work should be clearly labeled. Slides should be placed in 9" x 11" clear plastic sheets for safe handling and easy return. Each slide must indicate name of artist, date of work, top of slide, medium and dimensions in inches.. A self-addressed, postage paid envelope must be included with the application to insure the return of the portfolio. Although every effort is made to return portfolios, the school is not responsible for missing materials.

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 sculpture or glass art). Applicants should make clear to which M.F.A. program they are applying.

Ceramic Art

Applicants to the Ceramic Art program must indicate a commitment to working with ceramic materials - clay, glaze, fire, etc. The program is open to work in all aspects of ceramic art including functional pottery, vessel ceramics, architectural ceramics, ceramic sculpture and installation.

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 arts.

42 Degree Programs

This program is designed to recognize an emerging population of students who are committed to investigating these relationships through work that is not necessarily confined to a singular artistic discipline.

Given this cross-disciplinary structure, student work can be based in any of the mediums included within the Division of Expanded Media and the Division of Painting and Photography, but should demonstrate an involvement with or integration of digital or electronic processes.

Sculpture/Dimensional Studies

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.

It is important to be clear which program you want to enter, as portfolios must be reviewed by the appropriate selection committee.

All applications are made through the Graduate Admissions Office and all supporting documents and the portfolio should be submitted before the first of February of each year in order to be considered complete. Only completed applications will be sent to the Admissions Committee after February 1. Applications will be submitted to the appropriate selection committees for review. Enrollment is limited by facilities in the areas of concentration.

Those accepted must make a \$200 deposit and return a signed contract within 15 days after notification of acceptance, or acceptance becomes void. No applications for January admission are considered.

Financial Support

Each M.F.A. student is assigned either a Graduate Assistantship or a Graduate Teaching Internship. In either case, the student receives a grant for full tuition and a stipend of \$4,750 for the academic year.

Teaching Assistants help faculty members in the performance of their academic duties. Each Graduate Teaching Intern teaches one four credit hour studio course per semester. All assistants and interns have a commitment of 10 hours/week to meet the requirements of the stipend. Assignments are made in consultation among faculty, students and division chairpersons at the beginning of each semester.

Degree Requirements

Degree requirements include two years of residence and a minimum of sixty graduate credit hours. Reviews of work take place at the mid-term and end of each semester.

First-Year Requirements – Ceramic Art

Ceramics Studio	16-20
Glaze Calculation (Fall)	2
Raw Materials (Spring)	2
Art History (Ceramic)	4
Topics in Ceramic Art	2
First Year Graduate Seminar	2
Electives	0-4

First-Year Requirements – Electronic Integrated Arts

Advanced Electronic Arts	8
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*

Glass Studio	16-20
History of Art	4
Studio Practice	2
First Year Graduate Seminar	2
Electives	0-4

Concentration in Sculpture

Sculpture	16-20
History of Art	4
Studio Practice	2
First Year Graduate Seminar	2
Electives	0-4

The theoretical and creative studies of the first graduate year are so correlated as to provide the experience needed to identify and define the objectives of the second year.

The second year centers on the development of a body of work to be presented at the end of the year in a thesis exhibition. This exhibition must be accompanied by a written thesis report, which articulates the student's philosophical point of view.

The student's graduate faculty make quarterly reviews of work done and in progress. Before the review of the thesis exhibition, the final draft of the thesis report/technical statement/exhibition statement must be presented to the student's respective graduate committee. A representative collection of twenty 35mm original slides (Electronic Integrated Arts candidates may instead submit electronic documentation) of graduate work in all areas, with major emphasis on thesis exhibition, is due before graduation.

Overview of Required Courses**Ceramic Art**

ART 501	Studio Elective* (outside major concentration)	4
ART 552	Advanced Ceramics* (credits per semester, 1 st Year)	8-12
ART 555	Raw Materials	2
ART 556	Glaze Calculations	2
ART 560	Ceramics Graduate Seminar	2
ART 672	Written Thesis Preparation	4
ART 680	Thesis* (credits per semester, 2 nd Year)	8-12
ARTH 563	History of World Ceramics	4
ARTH 660	First Year Graduate Seminar	2
Minimum Total Credit Hours Required for the Program		60

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Electronic Integrated Arts

ART 501	Studio Elective* (outside major concentration)	8
ART 523	Work and Analysis	16
ART 524	Electronic Strategies (non-time based)	4
ART 525	Advanced Electronic Arts*	8
ART 526	Electronic Strategies (time based)	4
ART 671	Written Thesis Preparation-EIA	4
ART 681	Thesis*	8
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

ART 501	Studio Elective* (outside major concentration)	8
ART 529	Studio Practice	6
ART 565	Advanced Glass* (credits per semester, 1 st Year)	8-12
ART 672	Written Thesis Preparation	4
ART 682	Thesis* (credits per semester, 2 nd Year)	8-12
ARTH 561	History of 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

Concentration in Sculpture

ART 501	Studio Elective* (outside major concentration)	8
ART 522	Advanced Sculpture* (credits per semester, 1 st Year)	8-12
ART 529	Studio Practice	6
ART 672	Written Thesis Preparation	4
ART 682	Thesis* (credits per semester, 2 nd Year)	8-12
ARTH 561	History of 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, usually ranging from \$11-\$88 per credit hour, is charged for these courses

Master of Business Administration

The Alfred University M.B.A. is designed to prepare managers for the changing work environment of the 21st century. The program emphasizes development of leadership skills in an applied program utilizing teams, casework, and simulations. It is based upon the fundamentals of business knowledge known as the foundation classes. This is followed by an integrated, cross-disciplinary core, which reflects the current and emerging trends in management. Finally, students select four elective classes to complete their program.

M.B.A. coursework has three components: foundation, integrated core, and 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. The program requires a total of 61 credit hours for an individual without any foundation courses. For those with all foundation courses, the program can be completed in a minimum of 30 credit hours.

The integrated cross-disciplinary core reflects the current and emerging trends in management. Core courses have a balance of qualitative and quantitative course work to prepare students for effective leadership and management.

In addition to the required core, students must complete four electives as part of the program. Elective courses are designed to help students explore particular facets of business with an emphasis on strategic management.

Foundation

The foundation classes introduce the functional areas of business practice. These classes are satisfied at the undergraduate level:

ACCT 211	Financial Accounting	3
ACCT 212	Managerial Accounting	3
BUSI 113	Business Statistics	3
BUSI 261	Operations Research	3
ECON 201	Introduction to Economics and Markets	4
ECON 202	Principles of Macroeconomics	3
FIN 348	Managerial Finance	3
MGMT 328	Management and Organizational Behavior	3
MIS 101	Business Perspectives	3
MKTG 221	Marketing Principles and Management	3
Total credit hours		31

Integrated Core

MBA 610	Leadership Dynamics	3
MBA 612	Legal, Political, and Social Environment of Business	3
MBA 614	Financial Decision Making	3
MBA 620	Global Dimensions of Management	3
MBA 622	Quality Information Systems	3
MBA 624	Strategic Management Simulation	3
Total credit hours		18

M.B.A. Electives

Students may choose courses from the functional areas of business within the Business College. The M.B.A. Program Director must approve all electives.

Total credit hours **12**

Electives include but are not limited to the following:

MBA 640	American Economic History	3
MBA 642	Portfolio Management: Personal and Corporate Planning	3
MBA 644	Accounting Issues	3
MBA 646	Enterprise Resource Planning	3
MBA 648	Business Warehouse	3
MBA 660	Seminar in Business Issues	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 need 30 credits can complete their course of study in less than one calendar year. A typical schedule for such a full-time student would be as follows:

Fall Semester

MBA core	3
MBA core	3
MBA core	3
MBA elective	3

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Spring Semester

MBA core	3
MBA core	3
MBA core	3
MBA elective	3
MBA elective	3

Summer (6 weeks)

MBA elective	3
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Full-time students whose program requires more than the 30 credit hours would require more time, depending on their specific situation.

Part-time students can finish a 30 credit-hour program in a minimum of two years. Classes are offered in the late afternoon and early evening and students can reasonably plan to take a maximum of six credit hours per semester plus six credit hours in the summer. 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. A total of 9 credit hours may be completed on this basis.

Admissions

Admission to the program for both part and full-time students entails 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. Graduate Management Admissions Test. Applicants to the M.B.A. degree program must submit an official GMAT score.
4. Personal Statement
5. Submit application and above items to:

Office of Graduate Admissions
Alumni Hall
1 Saxon Drive
Alfred, NY 14802
(607) 871-2141

Assistantships

A limited number of assistantships are granted annually to full-time students. These take the form of assistantships that provide for remission of approximately one-half the annual graduate tuition. Graduate assistants work 7.5 hours per week with a graduate faculty member in their area of interest. These are renewable.

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, and how to survive the first year of one's first job.

Financial Aid

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

Facilities

The College 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 College is located in the F.W. Olin Building, a 5.6 million dollar facility providing classroom computer facilities and a trading room which are among the finest available.

Community Services Administration**Master of Professional Studies**

The Community Services Administration program is designed for persons interested in the management, administration, design and implementation of services in public, quasi-public and private agencies in law enforcement, probation, youth corrections, community planning and development, programs for the aging, housing, public health, hospital administration, county administration, social counseling and other social services. The focus of the program is on developing an understanding of social policy issues, an appreciation for organizational behavior and an ability to utilize effective management techniques.

The CSA program enrolls both full-time and part-time students. The latter students are often employed in community service agencies, and the university provides flexible course scheduling to assist them in completing the program. Students who have attended both full and part time have found that the M.P.S. degree has led to career advancement and mobility.

The Program

The CSA program is a 30-33 credit hour program* consisting of six core courses required of all students and four elective courses which allow the student to choose an area of specialization. After completion of the required core courses, each candidate must pass a comprehensive oral examination.

Full-time students can expect to complete the program in one year.

The core courses are designed specifically to relate to the needs of those intending to serve in administrative and managerial roles in human services oriented agencies.

Core Courses

CSAD 511	Interpersonal and Group Processes	3
CSAD 531	Political Environment of Community Services	3
CSAD 541	Basic Program Evaluation	3
CSAD 561	Organizational Processes	3
CSAD 571	Agency Management	3
CSAD 581	Human Resources Administration	3
CSAD 590*	Fieldwork in Community Services	3
Total Credit Hours for Core		18-21

*For those without employment background or experience in a community service agency, fieldwork in a local agency is required. For these individuals a total of 33 credit hours are needed in the program. The fieldwork experience provides practical experience in a government or non-profit agency in accordance with individual interests and needs.

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Program Electives

Elective courses in the Community Services Administration program may be selected from a variety of disciplines. The student, in consultation with his/her advisor, will tailor the elective courses to a particular area of interest. Examples of the areas of specialization that may be developed are policy analysis, counseling, management, aging, education, and social research.

Electives designed specifically for the program:

CSAD 515	Managerial Communication Skills	3
CSAD 526	Financing State and Local Governments	3
CSAD 534	Political and Legal Environment of New York State	3
CSAD 565	Computer Applications for CSA	3
CSAD 566	Management Information Systems	3
CSAD 573	Program Implementation	3
CSAD 575	Grants for Public and Non-Profit Organizations	3
Total Credit Hours for Electives		12

Total Credit Hours Required for Program: 30-33

Counseling and School Psychology

The Division of 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/Certificate of Advanced Study in Counseling
Master of Arts/Certificate of Advanced Study in School Psychology
Doctor of Psychology in School Psychology

Counseling Program

Overview

The Graduate Counseling Program in the Division of School Psychology is designed to meet the course work and field experiences requirements outlined in the accreditation standards of the Council for Accreditation of Counseling and Related Educational Programs (CACREP) and the National Council for Accreditation of Teacher Education (NCATE), and the requirements for becoming a Licensed Mental Health Counselor in New York State. The school counseling specialization also meets the course work and field experiences required by the New York State Department of Education for provisional certification as a school counselor.

The Graduate Program in Counseling is designed to train students to make appropriate and ethical decisions as counseling professionals. The most important of these decisions is the selection of strategies that empower clients to make personal decisions leading to the resolution of problems and resulting in an improved quality of life. Therefore admission is based on undergraduate achievement, and demonstration of high levels of maturity, flexibility, and self-understanding.

Mission Statement

Alfred University's graduate program in counseling prepares individuals for counseling positions in elementary, middle and high schools, colleges and universities, mental health centers and social service agencies. 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 MSED/CAS Program in Counseling

Goal A: To produce counselors 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 counseling profession and the current guidelines for practice.

Goal B: To produce counselors 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 understanding of the characteristics and needs of individuals at all developmental levels, as well as understanding of adaptive and maladaptive behaviors.

Objective B2: Students will develop proficiency in the counseling and consultation processes to develop programs to intervene both directly and indirectly with client's academic, behavioral, and emotional problems.

Goal C: To produce counselors who have an understanding of group development, dynamics, differing theoretical approaches to group work, group leadership skills and strategies.

Objective C1: Students will develop an understanding of career development and related life factors.

Objective C2: Students will apply knowledge of research methods, basic statistics, and ethical and legal considerations to the counseling process.

Objective C3: Students will develop an understanding of all aspects of the counseling profession and professional functioning including history, organizational structures, counselor role and function, ethics, standards, and credentialing.

Objective C4: Students will specialize in the areas of school counseling, community/agency counseling, and higher education (college/university student development).

Goal D: To produce counselors competent in the comprehension and application of concepts, models and techniques to professional practice.

Objective D1: Students will complete practicum and internship experiences that provide quality supervision in order to assure that they obtain adequate experience with clients in their chosen specialization area. This knowledge base will include the updated and appropriate use of information technology in their placements.

Objective D2: Students will engage in personal growth experiences that will allow them to assess their personal characteristics, skills and their readiness to enter the counseling field.

Objective D3: Students will be presented with opportunities to engage in research activities on their own or with faculty.

The Curriculum

Alfred University's program consists of a 50 credit hour program in Counseling leading to the Master of Science in Education degree and a 12 credit hour Certificate of Advanced Study degree. Both degrees are awarded after the completion of the internship. Within this 62 credit program students may specialize in school counseling, community/agency counseling, or college student development. Students specializing in school counseling will receive provisional certification as a New York State school counselor upon completion of the program. All program graduates will have fulfilled the educational requirements to become a Licensed Mental Health Counselor (LMHC) in New York State. Additional supervised work experience is required post-graduation for the LMHC.

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. The final semester (internship) must be completed on a full-time basis. Satisfactory performance and 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 course sequence for a full-time student follows:

First Semester

COUN 601	Foundations of Cultural Diversity	1
COUN 602	The Profession of Counseling	3
COUN 606	Human Development: The Lifespan	3
COUN 636	Principles of Counseling	3
COUN 637	Group Dynamics	1
COUN 656	Counseling Pre-Practicum	1
Semester Total Credit Hours		15

Second Semester

COUN 605	Career Development and Life Planning	3
COUN 638	Advanced Counseling Theory and Practice	3
COUN 642	Multi-cultural Counseling	3
COUN 657	Practicum in Counseling I	2
<i>Contemporary Issues Specialization Course:</i>		3
COUN 603	Issues in Agency Counseling	
or COUN 604	Issues in School Counseling	
or COUN 607	Issues in College Student Development	
<i>Exceptionality Specialization Course:</i>		3
COUN 616	Mental Health, Exceptionality, and Disability	
or COUN 617	College Students with Disabilities	
Semester Total Credit Hours		17

Third Semester Courses

COUN 639	Group Counseling	3
COUN 658	Practicum in Counseling II	3
COUN 671	Research and Statistics I	3
And two additional courses, which vary depending on Specialization:		
<i>School Specialization Requirement:</i>		6
PSYC 641	Introduction to Family Therapy	
PSYC 646	Consultation and Prevention	
<i>Agency Specialization Requirement:</i>		6
PSYC 641	Introduction to Family Therapy	
PSYC 646	Consultation and Prevention	
or COUN 619	Program Development and Grantsmanship	

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<i>College Student Development Requirement:</i>	6
COUN 618 Administration of College Student Development Services	
COUN 619 Program Development and Grantsmanship	
Semester Total Credit Hours	15

Fourth Semester Courses

<i>Internship:</i>	12
COUN 667 Internship in Agency Counseling	
or COUN 668 Internship in School Counseling	
or COUN 669 Internship in College Student Development	
COUN 695 Topics in Counseling/Internship Seminar	3
Semester Total Credit Hours	15

Total Credit Hours Required for the Program: 62

Undergraduate Preparation for the MSED/CAS 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 they majored in. No program credit is given for undergraduate study. Practical experiences are seen as valuable preparation, but cannot substitute for supervised graduate level practicum experiences.

All Counseling Program courses (unless otherwise noted) are open only to graduate students who are matriculated in the Counseling Program. In addition, some school psychology courses are available with permission of the instructor and division chair to matriculated graduate students in the Alfred University counseling programs. Up to 6 hours of graduate credit may be transferred to the master's degree.

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;
- a personal statement of objectives; and

Admission to the M.S.Ed./C.A.S. Counseling Program is limited to 18 students each year. Review of applications will begin on February 15. 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. John Cerio, Division of School Psychology, Alfred University, 1 Saxon Drive, Alfred, NY 14802. Telephone (607) 871-2212; e-mail: fcerio@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 permanent 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 psychologists for applied professional practice in schools and other child and family-oriented 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.

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.

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, as part of their role 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. This knowledge base will include 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 public school system in New York State. Normally, the student is paid a stipend by the public school in which he/she interns, covering tuition for that year.

Satisfactory performance and 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 MA/CAS Program:

First Semester

PSYC 601	Foundations of Cultural Diversity	1
PSYC 603	Foundations of School Psychology	3
PSYC 626	Psychological and Educational Measurements	2
PSYC 627	Norm-Referenced Testing I	2
PSYC 628	Academic Functioning	2
PSYC 636	Foundations of Interpersonal Effectiveness	3
PSYC 637	Introduction to Group Dynamics	1
PSYC 656	Field Experience in School Psychology I	1
Semester Total Credit Hours		15

Second Semester

PSYC 629	Social-Emotional Assessment	3
PSYC 632	Norm-Referenced Testing II	2
PSYC 638	Psychotherapy and Behavior Change	3

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PSYC 639	Exceptionality in Learning and Behavior	3
PSYC 651	Academic Interventions	3
PSYC 657	Field Experience in School Psychology II	2
Semester Total Credit Hours		16

Third Semester

PSYC 607	Learning and Cognition	3
PSYC 641	Introduction to Family Therapy	3
PSYC 646	Consultation and Prevention	3
PSYC 658	Clinic Practicum I	3
PSYC 671	Statistical Analysis and Research Design I	3
Semester Total Credit Hours		15

Fourth Semester

PSYC 606	Advanced Developmental Psychology	3
PSYC 609	Physical Bases of Behavior	3
PSYC 642	Clinical Seminar: Advanced Topics in School Psychology	3
PSYC 659	Clinic Practicum II	3
PSYC 695	Professional Practice Seminar	3
Semester Total Credit Hours		15

Fifth Semester

PSYC 667	Internship in School Psychology I	9
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Sixth Semester

PSYC 668	Internship in School Psychology II	9
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Total Credit Hours Required for the Program **79**

Undergraduate Preparation and Admission to the MA/CAS Program

(see below)

The Doctor of Psychology Degree Program

Overview

The Doctor of Psychology Degree 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; and
4. Professionals in higher education involved in the training of educators and clinicians. The program leads to New York State license eligibility as a psychologist as well as state and national certification as a school psychologist.

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: 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, especially the diversity inherent in rural, impoverished populations.

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.

Goal B: To produce 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: 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 as well as an appreciation for the interactive complementarity of research and practice.

Objective C2: Students will develop proficiency in the conducting and disseminating research related to professional practice.

Curriculum

A total of 114 credit hours are needed to complete the program. A minimum of 81 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, one year of supervised internship experience and research, with at least one year of full-time residency. The content of the coursework is a balance of scientific bases, and academic and professional applied psychology.

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Students are encouraged to develop a specialty through a combination of coursework, practica, and/or research in a particular area. All students must pass master's level written qualifying examinations, engage in a research apprenticeship, participate in practica and complete an internship. In addition, a doctoral qualifying examination and a dissertation are required.

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:

Years 1 and 2:

MA coursework		61
PSYC 672	Statistical Analysis and Research Design II	3
Years 1 and 2 Total Credit Hours		64

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	3-6
Electives		3-6
Semester Total Credit Hours		15-18

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	3-6
Electives		3-6
Semester Total Credit Hours		14-17

Year 4:

Seventh Semester

PSYC 667	Internship in School Psychology I	9
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Eighth Semester

PSYC 668	Internship in School Psychology II	9
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Year 5:

Ninth Semester

PSYC 699	Dissertation	3-6
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Tenth Semester

PSYC 699	Dissertation	3-6
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Minimum Total Credit Hours Required for the Program: 120

¹This sample program illustrates the more typical case of a student requiring five years to complete the degree.

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. No more than 6 graduate semester credit hours may be transferred to the master's degree. Students who enter the doctoral program with advanced standing (a master's degree in the field) must complete at least 50% of their credits for doctoral coursework at Alfred University.

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 15. 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. Jan Atlas, Division of School Psychology, Alfred University, 1 Saxon Drive, Alfred, NY 14802. Telephone (607) 871-2212; e-mail: atlasj@alfred.edu.

Education

The Division of Education offers a program in the teaching of literacy leading to the Master of Science in Education (M.S.Ed.).

Initial Certification in Childhood or Adolescence Education

Students who have a bachelors or masters degree desiring initial or provisional certification in Childhood or Middle/Adolescence Education should contact their local BOCES certification officer to determine the required coursework. Two local BOCES are: Allegany County BOCES (716) 376-8374 and Steuben County BOCES (607) 281-2166.

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After an initial consultation with the BOCES officer, a faculty member from Alfred University will work with individuals to insure that the requirements have been met for receiving initial certification through BOCES.

Mission and Objectives

The Education Division at Alfred University is guided by and agrees with the overall philosophical approach of the New York State Department of Education.

Namely, that a teacher education program must prepare students who:

1. have a thorough knowledge of the New York State standards and have developed the pedagogical competencies to ensure that all students can meet these standards;
2. develop breadth of knowledge in the content areas consistent with these new New York State standards;
3. develop depth of knowledge in the content areas consistent with these new New York State standards;
4. develop strong communication modes in the areas of writing, listening and speaking; and use these to promote student learning in the classroom;
5. develop an understanding of the developmental stages of the learner; understanding of motivation, cognitive development, child or adolescent psychology, psychology of the exceptional child, diagnostic skills and remediation strategies;
6. develop an understanding of the social context of education and schools, including understanding of multicultural dimensions of schools and teaching and roles of the family in education;
7. develop training in effective classroom management techniques so as to create a safe and productive learning environment;
8. develop an understanding of motivational principles and multiple approaches to instruction and can facilitate active learning and student achievement in various situations, use diverse forms of technology; and
9. develop an understanding for the principles and procedures of an organization and implementation of lessons and how to help learners achieve intended objectives.

Literacy Teacher Program (Pre-Kindergarten – 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 (Pre-K - 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 (Pre-K - grade 6).

Admission to the Literacy Program

Prior to entering the Literacy Program, applicants must have fulfilled all requirements for initial or provisional teacher certification and completed all three sections of the New York State teacher examinations, including the Content Specialty Tests (CST), and at least two letters of recommendation from professional sources. Applicants should send copies of these scores, along with official undergraduate transcripts and letters of recommendation to the Graduate Admissions office.

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	Human Development: Exceptionality	3
EDUC 695	Master's Project	3

Elective Courses

Select two of the following*:

EDUC 593	Use of Technology in the Classroom	3
SPED 545	Learning Disabilities	3
EDUC 542	The Teaching-Learning Process	3

*with advisor approval, other electives may be substituted

Total Credit Hours Required**30****Engineering and Science**

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

- . **Biomedical Materials Engineering Science**
- . **Ceramic Engineering**
- . **Electrical Engineering**
- . **Glass Science**
- . **Materials Science & Engineering**
- . **Mechanical Engineering**

Biomedical Materials Engineering Science**Overview**

Biomedical Materials Engineering Science (BMES) 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. In addition, biomolecule-materials composites with entirely new properties (e.g. biomimetics) will dramatically enlarge the field of biomaterials in the near future.

The BMES 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.

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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. 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 BMES 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

CEMS 568	Biomedical Materials	3
CEMS 569	Advanced Biomedical Materials Engineering	3
List A Technical Elective		9
List B Technical Elective		8
CEMS 680	Graduate Thesis	6
CEMS 660	Research Seminar	1
CEMS 690	Graduate Seminar (mandatory each semester)	0
Total Credit Hours Required for the Program		30

List A Technical Electives (Materials)

CEMS 505	Defects and Defect-related Process	3
CEMS 513	Nano-Structured Materials	3
CEMS 526	Surface Properties of Glass	3
CEMS 533	Statistical Experimental Design	3
CEMS 534	Polymer Characterization	3

CEMS 536	Physical and Mechanical Metallurgy	3
CEMS 538	Surfaces and Interfaces	3
CEMS 541	Advanced Crystallography	3
CEMS 542	Advanced Optical Microscopy	3
CEMS 543	Analytical Transmission Electron Microscopy	3
CEMS 567	Electrochemistry and Bioelectrochemistry	3

List B Technical Electives (Molecular and Cell Biology)

CEMS 563	Advanced Cell Biology	4
CEMS 564	Biochemistry: Proteins and Metabolism	4
CEMS 565	Biochemistry: Nucleic Acids	4

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 severe-use-condition applications where their unique chemical, thermal, optical, electrical, magnetic, and mechanical properties lead to superior performance in environments that 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 (sometimes called after-dinnerware), 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 space crafts.

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.

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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 pre-requisite 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.

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

CEMS 510	Advanced Ceramic Processing	
or CEMS 511	Science of Whitewares	3
Characterization Elective		3
Technical Electives		9
CEMS 660	Research Seminar	1
CEMS 680	Graduate Thesis (14 credit minimum)	14
CEMS 690	Graduate Seminar (mandatory each semester)	0
Total Credit Hours Required for the Program		30

Characterization Elective

CEMS 541	Advanced Crystallography	3
CEMS 542	Advanced Optical Microscopy	3
CEMS 543	Analytical Transmission Electron Microscopy	3
CEMS 544	Structure and Characterization of Glasses	3
CEMS 545	Characterization in Materials Science and Engineering	3

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:

- Communication systems
- Control systems
- Computer systems and software
- Optoelectronic and solid-state devices
- Power systems and machinery
- Superconducting electronics and lasers
- Electromagnetic waves & high voltage devices

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.

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)

Technical Electives		12-20
Math Elective		4
ELEC 680	Graduate Thesis	6-14
ELEC 690	Graduate Seminar (mandatory each semester)	0
Total Credit Hours Required for the Program		30

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Course Requirements (Project Option)

Technical Electives	23
Math Elective	4
ELEC 699 Master's Project	3
Total Credit Hours Required for the Program	30

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 one of the specified 400-level MATH courses offered for graduate credit:

ELEC 588	Applied Complex Variables	4
MATH 401	Advanced Engineering Mathematics	4
MATH 421	Numerical Mathematics	4
MATH 461	Geometry	4
MATH 481	Modern Algebra	4
MATH 491	Advanced Calculus	4

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. 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

Glass Electives		6
Characterization Electives		3
Technical Electives		6
CEMS 660	Research Seminar	1
CEMS 680	Graduate Thesis (14 credit minimum)	14
CEMS 690	Graduate Seminar (mandatory each semester)	0
Total Credit Hours Required for the Program		30

Glass Electives

CEMS 520	Optical Glasses	3
CEMS 521	Behavior of Glass-forming Melts	3
CEMS 522	Thermal Behavior of Glasses and Melts	3
CEMS 523	Structure of Glasses	3
CEMS 524	Mass Transport in Glasses and Melts	3
CEMS 525	Advanced Optical Behavior of Glasses	3
CEMS 526	Surface Properties of Glass	3
CEMS 544	Structure and Characterization of Glasses	3
CEMS 553	Mechanical Properties of Glasses and Ceramics	3
CEMS 555	Principles and Technology of Photonic Devices	3

Characterization Elective

CEMS 541	Advanced Crystallography	3
CEMS 542	Advanced Optical Microscopy	3
CEMS 543	Analytical Transmission Electron Microscopy	3
CEMS 544	Structure and Characterization of Glasses	3
CEMS 545	Characterization in Materials Science and Engineering	3

Materials Science & 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

CEMS 501	Solid State Physics	
or CEMS 503	Thermodynamics of Materials	3
CEMS 545	Characterization in Materials Science & Engineering	3
Technical Electives		9
CEMS 660	Research Seminar	1
CEMS 680	Graduate Thesis (14 credit minimum)	14
CEMS 690	Graduate Seminar (mandatory each semester)	0
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.

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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
MECH 690	Graduate Seminar (mandatory each semester)	0
Total Credit Hours Required for the Program		30

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 CEMS 660 - Research Seminar during the first semester, and attendance of CEMS 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 (CES 52X).

Students enrolled in the Ph.D. programs must pass a qualifying exam, usually within the first year of their enrollment. Students in Glass Science are also required to pass an oral comprehensive exam.

Candidates for the degree must write, present and successfully defend a doctoral thesis based on independent and original research conducted by the student. 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.

During the first semester, the student will select, with the approval of the Graduate Director, 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.

A Graduate Manual, available in the office of the Graduate Program Director, gives more detailed instructions and descriptions of requirements when students begin residence.

Art

ART 500 - Special Topics in Art 2 or 4 hours. Topics and issues not covered in other courses are explored. Topics vary from one term to another.

ART 501 - Studio Elective 1-6 hours. Required for all MFA graduate students. The studio elective gives students an opportunity to work in media that they are unfamiliar with or that might be incorporated into their studio work. Students must work in a media and studio outside their primary discipline. Any exceptions must be made in consultation with the appropriate advisor. Enrollment is by permission of the studio faculty.

ART 510 - Alfred Summer Ceramics 4 hours. Open to students of all levels of expertise. The program, a four-week intensive summer session, offers a comprehensive ceramic experience ranging from ceramic art history, and glaze calculation, to an expansive experience working with clay fabrication techniques. Those who attend Alfred Summer School will be given personal studio space and an opportunity to deepen their understanding of clay and glaze by firing in gas, electric, wood, raku and soda kilns. Participants work alongside artists-in-residence in an open studio environment where students can pursue self-directed projects. Technical support provided by Alfred MFA students in kiln firing, moldmaking and casting; slide lectures and discussion by faculty and guest artists will regularly punctuate the studio experience. (Offered only in Summer)

ART 522 - Advanced Sculpture/Dimensional Studies 1-8 hours. This is the primary component of individually directed/generated studio research during the first year of graduate studies in the program. The focus of the graduate student's critical inquiry is done in consultation with the specific division's faculty who are responsible for either the concentration in Sculpture or Glass Art.

ART 523 - Work and Analysis 4 hours. Functions as the primary forum for group dialogue among the MFA students in Electronic Integrated Arts. Regular group critiques of student work will occur during class time, allowing for the development of understanding of how work is produced, and the ability to contribute insight to others. Narrative, symbolic, personal, cultural and poetic implications will be addressed. In addition to dialogue relative to student's work, questions pertinent to contemporary art practice will be discussed weekly. This discussion will include debates on contemporary artists and current philosophical approaches to image making both critical and aesthetic. The goal is to provide the student with a strengthened sense of context from which to proceed as an artist.

ART 524 - Electronic Strategies (Non time based) 2 hours. Required of first year graduate students working in Electronic Integrated Arts. This course is designed to help create a context in which to ask questions about the nature of dynamic media relative to the making of contemporary printed images. Students will work with moving and still images using combinations of digital processes, including: video capture, digital drawing, electronic still cameras, scanning and image processing. Participants will investigate the making of large format digital images as ways to understanding how ideas about print media are expanding. The course will focus on the impact of digital print media and how it functions to construct the visual languages of contemporary art making. Experimentation with applications that cross media will be extensively explored. These media may include: drawing, painting, photography, bookmaking, video, multimedia and Internet interfaces.

The studio comprises a state of the art Macintosh lab with scanning, video editing and grabbing capabilities and Internet interfaces. Printing capabilities include CD ROM authoring, film recording, image setting, and a large variety of digital color printing devices including wide format digital printing.

ART 525 - Advanced Electronic Arts 1-8 hours. Required each semester for graduate students working in Electronic Integrated Arts. Each graduate student will register with one of the Division of Sculpture/Dimensional Studies and Electronic Arts faculty on an independent study basis. This course is an opportunity for self-generated studio work. During the third and fourth semesters the primary emphasis of this course will be thesis preparation.

ART 526 - Electronic Strategies (Time based) 2 hours. Required of first year graduate students working in Electronic Integrated Arts. This course provides both a technical and theoretical foundation for the production of time-based works in the integrated video and sound studios. Experimentation with application that crosses media will be extensively explored. These media may include analog and digital video image processing, digital video editing, CD-ROM production, computer animation, web casting and electronic music in relationship to the visual arts. Through demonstrations, critiques and lab work students will gain a thorough understanding of the technical process as well as insights and expertise into the physical integration of traditional mediums with new technologies. Emphasis will be placed on the making of artwork through the use of electronic integrated media. The course will also include presentations, class discussions and readings designed to create a critical dialogue that connects theoretical, historical and contemporary perspectives through the practice of making art using electronic media. Areas of theoretical concern will include historical and contemporary perspectives on imaging and sound technologies.

ART 529 - Studio Practice 2 hours. This seminar is the primary forum for group critiques by first year graduate students in Glass Art and Sculpture. Emphasis is on group critiques and discussions about contemporary art issues as related to the studio work.

ART 538 - Large Format Digital Imaging 4 hours. Contemporary art making has been profoundly impacted by new digital technologies. This course focuses on how digital print media informs and evolves visual language for artistic expression. Providing each participant with a hands-on opportunity to explore large-format digital printing technologies, it is designed to help create a context in which to ask questions about the nature of dynamic media relative to the making of contemporary printed images. Looking for transitions, collapsing barriers, and sharing vocabulary, artists will consider multiples, sequencing, mark-making, notation, gesture, and narrative concerns within both digital media and traditional printmaking. Further experimentation across media will be investigated. These media may include: drawing, painting, photography, video, animation, multi-media and internet interfaces. Participants will be able to experiment with printing on a variety of handmade papers (up to 36"x 48") using eight color, permanent ink, large-format, ink jet technology. The course welcomes artists with beginning and advanced technological experience.

ART 550 - Independent Study 1-4 hours.

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ART 552 - Advanced Ceramics 1-8 hours. This is the primary component of the first year of ceramic art graduate studies. The focus is on individually directed studio research in consultation with the faculty. Studio work is evaluated at the midterm and final reviews by the entire faculty. Students work individually with a different faculty advisor each semester.

ART 555 - Raw Materials 2 hours. A general course in ceramic raw materials discussing the origin and properties of clay's fluxes and fillers used for various ceramic clay bodies. Laboratory exercises involving use and properties of materials and development of clay body compositions for pottery, vessels and sculpture.

ART 556 - Glaze Calculations 2 hours. The composition, properties and uses of materials in glazes. Calculation of glaze formulas and batches. Laboratory exercises in the development of color and texture.

ART 560 - Ceramic Graduate Seminar 2 hours. This seminar is required for first year, second semester graduate students in Ceramic Art. It is a faculty structured, student generated, and research discussion group course focusing on the history of contemporary ceramic art, mid 19th century to the present. It is intentionally founded on principles of artist studio practice rather than on academic art history methodologies.

ART 565 - Advanced Glass 1-8 hours. This is the primary studio component of the first year of glass art graduate studies, and is taken in the first and second semesters. The focus is on individually directed studio research in consultation with the faculty. There is a wide range of studio work done within the program, utilizing blowing and casting techniques, lamp worked glass, and light emitting technologies, i.e. neon. Work is evaluated at midterm and final reviews by the entire faculty.

ART 591 - Ceramic Sculpture-Hot House Floriculture 4 hours. Students seeking time, space and excellent facilities to pursue self-directed projects in ceramic sculpture or installation will excel in this intensive ceramic course. Develop new ideas, deepen your knowledge of process and technique, strengthen your portfolio, engage in critical dialogue with Alfred faculty and your peers. Accomplish an extraordinary amount of work in a short period of time. (Summer Session)

ART 601 - Studio Advising Support 1-8 hours. Provides graduate students an opportunity to work with faculty outside of their division. Enrollment is by permission of the faculty, based on space/time availability and with approval of respective Division Chair.

ART 671 - Written Thesis Preparation for Electronic Integrated Arts 4 hours. The studio work is supported by a written thesis report that includes a detailed statement about the work, a technical documentation of materials and processes used, and 20 slides of the thesis work. This documentation is archived in the Scholes Library. Additionally, the course is structured as a seminar with all second year EIA MFA students participating.

ART 672 - Written Thesis Preparation 2 hours. The studio work is supported by a written thesis report that includes a detailed statement about the work, a technical documentation of materials and processes used, and 20 slides of the thesis work. This documentation is archived in the Scholes Library. Additionally, the course is structured as a seminar with all Ceramic Art and Sculpture/Dimensional Studies MFA students participating.

ART 680 - Thesis-Ceramic Art 1-8 hours. The ceramic art thesis is a body of work that is presented in a gallery exhibition at the end of the fourth semester of study. Students work with individual faculty studio advisors, with midterm and final reviews by the entire ceramic faculty. The faculty will choose a work from the exhibition for the Glory Hole Collection of the Schein-Joseph International Museum of Ceramic Art at Alfred.

ART 681 - Thesis-Electronic Integrated Arts 1-8 hours. Required each semester for graduate students working in Electronic Integrated Arts. Each graduate student will register with one of the Division of Sculpture/Dimensional Studies and Electronic Arts faculty on an independent study basis. This course is an opportunity for self-generated studio work. During the third and fourth semesters the primary emphasis of this course will be thesis preparation.

ART 682 - Thesis-Sculpture/Dimensional Studies 1-8 hours. This course embodies the studio component of the written thesis. The focus is on the continuation of individually directed studio research in consultation with the faculty. A body of work is presented in a gallery exhibition at the end of the fourth semester of study.

Art History

ARTH 500 - Topics in Art History 2 or 4 hours. Topics vary from semester to semester.

ARTH 501 - African Art I 4 hours. A survey of the arts of sub-Saharan Africa with an emphasis on sculpture. The course focuses on the role art plays in African cultures and also introduces students to a wide range of art forms and styles.

ARTH 502 - African Art II 4 hours. Continuation of ARTH 501, a survey of the arts of sub-Saharan Africa.

ARTH 503 - Oceanic Art 4 hours. A survey of the arts of Melanesia, Micronesia, Polynesia, and Australia. The course surveys the arts of sculpture, ceramics, and personal adornment and examines their relationship to other aspects of oceanic society.

ARTH 511 - Pre-Columbian Art 4 hours. A survey course that acquaints students with major monuments and styles of Pre-Columbian American art, including: architecture, sculpture, ceramics, dress, and body adornment. Examined are several millennia of pre-contact art traditions in Meso America and South America from earliest art producing cultures to the Aztecs and Incas. The course looks at archaeological contexts and investigates possible meanings for art and written records dating from early periods that enhance our understanding of later cultures.

ARTH 521 - Topics in Greek and Roman Art and Architecture 4 hours. A study of art and architecture from ancient Greece and Rome. Among other issues, the course addresses changing attitudes of style, function, and patronage during this period and investigates the influence of social and religious belief. The study of Greek art emphasizes the development of stylistic periods. Roman art study focuses on individual historical periods of various emperors as reflected in the patronage.

ARTH 523 - Medieval Architecture, AD 300-1500 4 hours. This course focuses on architecture and architectural sculpture. It traces the development of Imperial and Byzantine architecture of the Mediterranean region and then investigates early medieval, Romanesque and Gothic architecture. Topics discussed include the imperial tradition, the Pilgrimage Road, the monastic orders, birth of Gothic style under the patronage of Abbott Suger, and the development of High Gothic, both secular and ecclesiastical.

ARTH 525 - Northern Renaissance Art: Quagmires, Quandaries & Queries 4 hours. This course will look at some of the major points of debate within Northern Renaissance scholarship (Northern Europe, ca. 1400-1570), beginning with the fabulous "Tres Riches Heures de Duc de Berry" and ending with Brueghel's "Children's Games". Each week will focus on one or two works of art and problems relating to historical context, authorship, techniques of production and interpretation.

ARTH 531 - Italian Renaissance Art 4 hours. An in-depth study of the Renaissance Period and its theories. Artistic developments in Italy are emphasized.

ARTH 532 - Northern Renaissance Survey 4 hours.

ARTH 533 - Baroque Art 4 hours. This class will look at the art and architecture of 17th century Europe, from Bernini to Rembrandt, and look at the historical, political, and religious context of this dynamic era. Among the issues to be discussed will be Counter Reformation spirituality and its impact on religious painting, urban planning and the rise of the modern city, the staging of kingship, the art market, the representation of gender roles and the rise of the art print. Course will consist of lectures, discussions on assigned readings, exams and a short research paper.

ARTH 534 - Art of the 18th Century 4 hours. A thematic survey of 18th Century art, architecture, art institutions, and art theory of Europe from classical Baroque, Neo-Classicism, and early Romanticism with contextual emphasis on economic, social, cultural, intellectual, and political developments in France, Austria, Venice, England, and Spain.

ARTH 540 - Ceramics from Arts and Crafts to Modernism, 1876-1929 4 hours. Beginning with the 1876 Philadelphia Centennial Exposition and ending with the 1929 International Exhibition of Ceramic Art, this course will survey tidal shifts in American ceramics, exploring the substance of styles. We will examine claywork in relation to patterns of consumption and emulation, artistic invention, and tradition. We will measure change by looking at expositions in galleries, world's fairs, and museum collections. Original archival research is an important component of the workload.

ARTH 541 - Impressionism 4 hours. This course presents an exploration of the origins and development of Impressionism and Post-Impressionism against its social, historical, and art historical milieu. Students study Impressionism's "realist" underpinnings, themes of modernity, and stylistic development as well as its intersection with academic and vernacular forms of visual expression.

ARTH 542 - Primitivism: A Western Perspective 4 hours. This course surveys the concept of the "primitive" in Western art from the Enlightenment to the present. Students explore the shifting nature of primitivism, examine the relationship between art and colonial expansion, and critique the formal and thematic appropriation of non-Western artifacts by European and American artists.

ARTH 543 - Modern Art 4 hours. Encompassing the movements of Symbolism to Surrealism, this course covers the developments in modern art during the first half of the 20th Century. Students explore such themes as modernity, primitivism, and utopian theory as well as the stylistic developments and formal innovations of this period.

ARTH 551 - Object/Objecthood 4 hours. An examination of the changing nature of sculpture in the twentieth century, ranging from formalist object to surrealist fetish and minimalist object to performance “residue.” Artists include: Constantin Brancusi, Alberto Giacometti, Donald Judd and Yoko Ono. We will critique the shifting conditions and critical reception of the sculptural object through a series of theoretical texts.

ARTH 552 - Contemporary Projects in Art 4 hours. This interactive course will focus on and study the projects of selected contemporary artists. These projects will serve as platforms for investigating issues and problems related to various contemporary art forms and movements including, the embodiment of the viewer, play and reality, new technologies and consciousness, ironic modernism, and the critique of the post-medium condition.

ARTH 553 - Contemporary Art Theory 4 hours. This course surveys developments in Western Art from the late modernism of the post-war era to post-modernist interventions at the end of the 20th Century.

ARTH 554 - Recent Sculptural Practices 4 hours. A series of recent projects exploring contemporary issues in sculpture will be the focus of this class. We will be looking an international array of artists, including: Matthew Barney (United States), Robert Irwin (United States), Juan Munoz (Spain), Doris Salcedo (Colombia), Thomas Schutte (Germany), and Rachel Whiteread (Britain). The work of these artists will be examined in the context of larger post-war debates.

ARTH 561 - History of Sculpture 4 hours. A series of case studies exploring contemporary issues in sculpture will be the focus of this class. Artists include: Ann Hamilton, Mona Hatoum, Juan Munoz, and Doris Salcedo. Historical precedents and cross-cultural practices will be discussed to highlight current debates.

ARTH 562 - History of Photography 4 hours. A survey course covering the pre-history of photography up to Post Modernism. Required readings directly related to the slide lectures are placed on reserve at Scholes Library.

ARTH 563 - History of World Ceramics 4 hours. A thematic approach to the history of ceramics that is global and cross-disciplinary, designed for students to re-conceive their inheritance and its varied strands of tradition, convention and invention. Topics include ritual objects, tableware and dining customs and the funereal. Evidence will span an enormous range of cultures and era, from ancient to contemporary. The approach of material culture will reveal the complex cultural issues surround the ceramic medium.

ARTH 564 - History of Design I 4 hours. Trace chair, the coffee mug, and the printed page back in time to consider their significance in America between 1600 and 1900. Consulting primary documents, such as houses, furnishings, and photographs, and contemporary secondary readings, this course will examine the concepts, social meanings, styles, and craftsmanship of American material culture.

Different theoretical models of interpretation will complement looking at stuff and learning about history. Our focus will be on local Southern Tier design, reconsidering the idea of style, diffusion, industry and the culture of the country.

ARTH 565 - History of Design II 4 hours. Looking at tiny objects and massive architecture and every thing in a size in-between that was made in the years from 1900 to 2006, students will be introduced to a global and diverse definition of design. We will ask many questions of many artifacts to determine the value of materials, craftsmanship, consumption and ideology: Is a chair an idea? Does a building's facade determine the politics of its nation? Is a type design about craftsmanship or mass-consumption? Theoretical, historical, and aesthetic readings will assist our study of material evidence and visual culture.

ARTH 570 - (Re)Considering the Ceramic Object 4 hours. This class will attempt to re-map twentieth-century ceramics and its critical place within the broader art system. Our discussions will be based on a range of texts and images, both within and beyond the field of ceramics. Particular emphasis will be placed on recent studio practices.

ARTH 571 - Contemporary Ceramic Art 4 hours. We will investigate developments in studio ceramic art over the past fifty years. Topics include: a commentary on Modernism and materiality, a critique of the postmodern interest in the decorative, and a review of current scholarship in the field. Contemporary Work will be examined in their historical contexts and cultural traditions.

ARTH 581 - American Folk Traditions: Vernacular Art/Architecture 4 hours. This course will explore the art of largely self-taught artists in the United States from the earliest colonial period to present day. A variety of media will be discussed including portraiture, tombstone carving, quilts, architecture and furniture design. We will also look at distinctive regional traditions, such as the decorative arts produced by the Shakers and Yard Art produced in the deep South today. Course will consist of lectures, discussions on assigned readings, exams and a research project on which students will present to the class.

ARTH 582 - Women in Art 4 hours. This course considers various gender issues in art history including the role of women artists in western and non-western cultures, feminist re-evaluation of art history, and the existence of a "feminine art." Students are assigned research papers or oral reports on topics generated by readings, lectures, and class discussions.

ARTH 584 - Strategies of Display: Museums, Fairs, and Flea Markets 4 hours. Theorizing artistic reception has an added urgency in our era when presentation is the product. Artists need to constantly re-think their own practice in relation to new technologies, new ideas and the resurgence of old ideas. This course will look at how artists have addressed modes and technologies of presentation and how theories of the space of art have played a role in defining culture and cultural institutions. A critical appreciation of light, frames, and framing devices and other exhibition technologies will be surveyed in museums and malls, flea markets, and artist's homes.

ARTH 590 - Issues in Non-Western Art Seminar 4 hours. A round-table seminar based on extensive group discussions and in-depth individual research on non-Western art topics.

ARTH 591 - New Histories Seminar 4 hours. This seminar emerges from recent interest in rethinking monuments, in reconstructing historical narratives and in reshaping public memory. Students examine recent art dealing with historical events and the recovery of these narratives into a new collective memory. Students debate the nature of history and memory in contemporary culture and the use of visual forms to combat cultural amnesia.

ARTH 592 - Contemporary Topics Seminar 4 hours. A round-table seminar based on extensive group discussions and in-depth individual research on significant contemporary events and developments in and around the art world.

ARTH 593 - New Technology Seminar 4 hours. A round-table seminar based on extensive group discussions and in-depth research on recent innovations in technology and how that technology has impacted art production and theory.

ARTH 594 - Pablo Picasso Seminar 4 hours. This course examines issues of representation and reception in the work of Pablo Picasso. Students will critically explore a broad range of Picasso's work, including painting and printmaking, sculpture, and ceramics. This artist, whose production spanned most of the 20th century, will serve as a case-study for discussions on the nature of modern theory and art criticism.

ARTH 660 - First Year Graduate Seminar 2-4 hours. Required for all first year MFA graduate students. This seminar brings together the students working in all three graduate programs to facilitate their participation in creating a framework for understanding the practice of art making in relation to the contemporary, global and cultural terrain.

Biology

Graduate students may take this 400-level courses for graduate credit:

BIOL 485 - Internship in Biology 1-16 hours. Off-campus research in consultation with faculty and project advisors. Open to junior, senior and graduate biology students.

Graduate Courses:

BIOL 550 - Independent Study 1-4 hours.

BIOL 580 - Research 2 or 4 hours. Open primarily to graduate students, others by permission.

Business Administration

Foundation Courses (undergraduate credit only)

ACCT 211 - Financial Accounting 3 hours. Introduces financial reports and the underlying concepts and processes. Financial reports are a major way in which a business enterprise communicates its activities and their results to owners, government authorities and the general public.

ACCT 212 - Managerial Accounting 3 hours. Internal accounting reports are used by management to assess results, plan further operations and make decisions as to capital projects, product lines, and pricing.

78 Courses of Instruction

Illustrates the use of such interpretive techniques as cost-volume-profit analysis, variance analysis, cash forecasting, and rate of return to develop managerial decisions based on accounting data. Prerequisite: ACCT 211.

BUSI 113 - Business Statistics 3 hours. The elements of basic statistical theory and technique are introduced with an emphasis on applications to business situations. Computer-based software packages complement these objectives.

BUSI 261 - Operations Research 3 hours. Scientific approach to the analysis and solution of economic and business problems to provide a quantitative basis for model building and decision making. Mathematics is applied to business decision making through techniques such as linear programming, queuing theory, network models, Markov analysis, etc. Prerequisites: MATH 107 and BUSI 113; ECON 201 either previously or concurrently.

ECON 201 - Introduction to Economics and Markets 4 hours. Introduction to the principles of microeconomics and a survey of contemporary economic issues. Includes study of market systems and structures, government regulation of business, labor markets and income distribution, strategic behavior, and market failure. Prerequisite: 70 or better on Math Competency Exam, or sophomore standing. (E)

ECON 202 - Principles of Macroeconomics 3 hours. Study of the factors involved in the problems of unemployment, inflation, economic growth, and the role of fiscal and monetary policies. Includes coverage of the money and banking system and international trade. Prerequisite: ECON 201

FIN 348 - Managerial Finance 3 hours. An introductory course explaining the tools and the new responsibilities modern financial managers deal with in a rapidly changing world environment characterized by uncertainty. The course identifies and examines the financing needs of the firm, its cost of capital, and assets and liabilities management using modern decision support systems for the application of new financial innovations, such as contingent claims and securitization of assets. Prerequisites: ACCT 211/212, ECON 201/202.

MGMT 328 - Management and Organizational Behavior 3 hours. This course builds an understanding of individual and group behavior within organizations, the means of assessing such organizational behavior and specific techniques for managing behavior toward improved performance. The goal for the course is for students to develop skills grounded in behavioral science that are essential for assuming a leadership position in organizational environments. Prerequisite: Junior standing.

MIS 101 - Business Perspectives 3 hours. This course helps students develop a sense of business systems, methods and issues. It is designed to raise sensibilities about the business environment, ethics, and decision making. It also acknowledges the importance of fundamental computer concepts for business, covering spreadsheet, database, presentation software, as well as website design.

MKTG 221 - Marketing Principles and Management 3 hours. A survey of marketing concepts, principles, techniques and theories. Emphasizes the development and implementation of an effective marketing strategy, and control of the marketing function within the firm. The role of marketing in society and the efficient distribution of goods and services are addressed. Prerequisites: ECON 201, junior standing.

Graduate Courses

MBA 610 - Leadership Dynamics 3 hours. The course focuses on the theory and practice of situational leadership. Course participants will learn about theories of motivation, organization design and performance management by examining factors that influence individual and group performance management. Teaching methods will include the use of the College's behavioral lab facilities, interactive software, diagnostic tests to evaluate each participant's leadership skills, experiential exercises and group discussions.

MBA 612 - Legal, Political, and Social Environment of Business 3 hours. This course emphasizes how optimal managerial decisions can be made in the current public policy environment. Government-business relations and government policies will be analyzed through readings and cases to evaluate how successful firms have adapted to their environment.

MBA 614 - Financial Decision Making 3 hours. A case-based course in the application of financial models and techniques. Students will analyze cases which focus on topics such as capital budgeting, dividend policy, cost of capital, leasing and working capital management.

MBA 620 - Global Dimensions of Management 3 hours. This course develops the analytical capability and perspectives to manage a firm in a global economy. The course will explore the global strategies of multi-national firms by integrating the viewpoints of functional disciplines. It will cover the impact of cultural differences on marketing and management, of government policies on trade and investment, foreign exchange and international capital markets and how an effective manager adapts to these issues.

MBA 622 - Quality Information Systems 3 hours. The course will focus on the design and development of management systems which contribute to achieving customer-driven, continuous improvement. The course will be interdisciplinary in nature, drawing principally from the fields of MIS, market research, management theory and statistical control. The course will utilize a mix of case studies, videos, simulations, lectures, group projects, computer applications, and research assignments in developing an appreciation of the theory and practice of TQM. Emphasis will be on developing skills with specific techniques and systems central to the deployment of TQM principles. The course will also emphasize class discussion and the presentation of individual research to the class.

MBA 624 - Strategic Management Simulation 3 hours. Working in teams, students will participate in a computer-based simulation of a strategic management system. Emphasis will be placed on the integration of functional business disciplines. The simulation will be complemented by exposure to "current strategic" management theory and the use of "live" case studies.

MBA 640 - American Economic History 3 hours. In order to understand business as it is conducted in the new millennium, it is necessary to understand how business was conducted in the past. The readings in this course will focus on the "Golden Age of Business" in the United States beginning from the aftermath of the Civil War until the Great Depression.

MBA 642 - Portfolio Management: Personal and Corporate Planning 3 hours. A course dealing with applications of financial theory to individuals and corporations. Topics include budgets, insurance, investments, taxation and wealth creation.

MBA 644 - Accounting Issues 3 hours. The primary objective of the course is to learn to make effective use of management accounting data within an organization. A secondary objective is to develop the analytical skills necessary to diagnose complex business problems in an accounting context. The world of management accounting is dynamic, and requires knowledge of the most recent advances in management accounting. The course will focus on strategic issues in managerial accounting that are helpful for organizations operating in today's uncertain environments. These issues include, but not limited to, Activity-Based Costing and Management (ABC/ABM), Kaizen (continuous improvement) Costing, Value chain analysis and inter-organizational control, Target costing, Balanced Scorecard, Transfer Pricing, and Strategic Performance Measurement.

MBA 646 - Enterprise Resource Planning 3 hours. The objective of the course is to develop awareness of the need for enterprise wide information systems. Students will learn this cutting edge technology in Information Systems, and how this system provides the foundation of a wide range of e-commerce-based business processes. Topics include, pros and cons of ERP system, evolution of ERP, systems requirements of ERP system, systems implementation, and Supply Chain Management. Students will have hands-on experience with SAP R/3 systems and accelerated SAP.

MBA 648 - Business Warehouse 3 hours. The goal of this course is to introduce the student to the use of business techniques to improve decision making. The course is structured to answer the following: 1. What are the technology and the architecture of data warehousing? 2. What is data mining? 3. What are the data mining techniques? SAP BW will be used to demonstrate extracting data from online transaction processing systems, dealing with poor data quality and structuring the data.

MBA 650 - Independent Study 1-4 hours.

MBA 660 - Seminar in Business Issues 3 hours. A seminar that focuses on special topics in the field of management and business administration. Topics vary from one semester to another. May be repeated for credit.

Ceramic Engineering, Materials Science and Engineering, Glass Science, Biomedical Materials Engineering Science

Graduate students may take this 400-level course for graduate credit:

CEMS 458 - Materials for Electronic Packaging 3 hours. Electronic package systems for information processing include the function of electrical interconnection, cooling and physical support for the sets of semiconductor I.C. chips plus other components in electronic systems. Semiconductors, ceramics, polymers and metals are generally used in combinations in all packages; and, hence, it is necessary to understand their bulk properties as well as their interface structures and characteristics. This course focuses on the design of materials and processing needs for packaging technology from chip to board using principles involved in key areas of materials science and engineering disciplines. Basic properties and processing methods used in the design and fabrication of semiconductor IC's, ceramic substrates, metal interconnections, and polymers are discussed. Prerequisites: CEMS 314, 344.

Graduate Courses:

CEMS 500 - Special Topics 2-4 hours. The course covers advanced topics which are not ordinarily covered in detail in the general curriculum, but are either current areas of faculty research or areas of current or future industrial interest.

CEMS 501 - Solid State Physics 3 hours. This course discusses the microscopic origins of the physical properties of solids. The focus is on the atomic lattice and associated mechanical, thermal and dielectric properties; energy band structure; the electronic properties of metals, semiconductors and insulators; magnetic properties; optical properties; superconductivity; and the dielectric, ferroelectric and piezoelectric properties of insulators.

CEMS 502 - Quantum Physics 3 hours. Presents the fundamental theory of physical phenomena, of matter and energy and of their interaction. Emphasis is placed upon a thorough grounding in the concepts and techniques, which is then applied to diverse phenomena of importance to ceramics and to solid-state chemical physics.

CEMS 503 - Thermodynamics of Materials 3 hours. This course seeks to advance the students' understanding of classical and statistical thermodynamics as applied to materials systems as well as to expand students' ability to solve advanced thermodynamic problems. This course will cover classical and statistical thermodynamics as related to solution theory, phase equilibria, phase transformations, surface thermodynamics, and defects.

CEMS 504 - Kinetics and Non-equilibrium Processes in Material 3 hours. This course seeks to provide students with an advanced understanding of kinetics and non-equilibrium processes in materials. Topics will include the phenomenological and atomic theory of diffusion, kinetics of solid-state reactions, and diffusional and diffusionless phase transformations. Applications of the course materials to materials research problems will also be discussed.

CEMS 505 - Defects and Defect-related Processes 3 hours. This course discusses the nature and behavior of defects (including point, line and planar, etc.) in ceramics. The relationship of defect properties to such basic processes as mass transport diffusion and conductivity is considered. The discussion will largely be at an atomistic level and will cover non-stoichiometry, and the role of impurities in phenomena such as grain-growth and sintering.

CEMS 506 - Advanced Engineering Mathematics 3 hours. The classical partial differential equations of physics; the heat equation; the wave equation (vibrating strings and membranes); Laplace's equation. Includes orthogonal sets of functions, Fourier series, separation of variables, Sturm-Liouville problems boundary value problems and the Fourier integral.

CEMS 510 - Advanced Ceramic Processing 3 hours. This course provides a review of all relevant issues concerning the processing and sintering of advanced ceramic materials - discussing powder preparation and characterization, colloidal and sol-gel techniques, powder consolidation and forming, sintering theory and practice, and microstructure evolution. The course shows the importance of each step, and the critical interconnections among the steps, in the overall fabrication of ceramics; focuses on the formation of ceramics by firing consolidated powders; reveals which ceramic manufacturing methods are easier to employ and why;

covers the properties of colloidal suspension; elucidates the liquid-phase sintering and vitrification; describes the role of solid solution additives in the sintering of ceramics; considers the densification of amorphous materials that can crystallize during firing; and more.

CEMS 511 - Science of Whitewares 3 hours. The science and technology of whitewares (i.e. primarily stonewares and porcelains) covering mineralogy, raw material characterization, mixing, rheology and plasticity, forming processes, drying, firing, phase equilibria, thermal stress evolution, microstructural characterization, physical properties, and glazing. Special emphasis will be given to colloidal science and its application to clay materials, the impact of particle-particle interactions on suspension rheology, plasticity, and particle packing, and to the application of phase equilibria to the microstructural evolution in whiteware bodies.

CEMS 512 - Colloids and Interfaces 3 hours. This course will develop a fundamental understanding in several areas of colloidal and interfacial chemistry that are important in the modern processing of fine ceramics, adsorption from solution, wetting, dispersion and stability of suspensions, sedimentation, osmosis effects, rheology, light scattering, emulsions, and gels, and how those principles apply to modern ceramic processing.

CEMS 513 - Nano-Structured Materials 3 hours. This course provides a basic knowledge of nano-structured materials. The first section deals with fundamentals of the synthesis processes, e.g. gas phase reactions or precipitation reactions. In the second section the various applications and properties of nano-structured materials will be discussed. Examples are quantum dot (lasers), ductile ceramics, solar cells, memory devices, or magnetic refrigeration.

CEMS 519 - Ceramic Science for the Artist 2 hours. The science and technology of whitewares covering mineralogy, raw material characterization, mixing, suspension behavior and control, rheology and plasticity, forming processes, drying, firing, the use of phase diagrams, thermal stress and microstructural evolution, mechanical properties, and glazing. This course provides the artist with the practical basis necessary for analyzing problems commonly encountered in the production of whitewares.

CEMS 520 - Optical Glasses 3 hours. A detailed discussion of the primary glasses used in optical applications. Approximately one half of the course will focus on pure and doped vitreous silica. The remainder of the course will deal with glasses containing rare earth ions, infrared transmitting glasses, and traditional optical glasses. The production, structure, and general properties of each type of glass will be discussed in detail. The optical application of each glass will be stressed throughout the course.

CEMS 521 - Behavior of Glass-forming Melts 3 hours. The behavior of glass-forming melts from the fluid range to transition to the glassy state is explored in depth. Starting with a review of the glass formation criteria and the structure, the phase transformation phenomena (liquid immiscibility, crystallization, the glass transition) are examined. Theories of liquid state and viscosity are developed. Glass transition arguments based upon free volume, thermodynamics and kinetics are discussed. Additionally, properties of melts such as fining and redox equilibria are briefly studied. Finally the development/relaxation of stresses, annealing and tempering of glass are dealt with. The course is designed to give the student a better understanding of the science why glass behaves the way it does. The mathematics content is moderate.

CEMS 522 - Thermal Behavior of Glasses and Melts 3 hours. This course presents a detailed discussion of the thermal behavior of glasses. Analytical techniques considered include DSC/DTA, dilatometry, TGA, EGA, hot stage microscopy/diffraction, viscosity, and thermal conductivity. The determination of T_g , effects of thermal history, fictive temperature, nucleation and crystallization rates, specific heat measurements, thermal expansion coefficients, viscosity, phase separation, first order phase transformations, thermal conductivity and diffusivity, decomposition of raw materials and other batch reactions, and thermal shock behavior will be discussed.

CEMS 523 - Structure of Glasses 3 hours. In the first half of the semester, this course involves an in depth look at the means by which the structure of glasses is described and the measurement techniques used to elucidate the structure. In the second half of the semester, the various models of glass structure are discussed and the students are required to research and champion a particular glass structural model in the form of an in-class debate.

CEMS 524 - Mass Transport in Glasses and Melts 3 hours. This course introduces the student to a wide variety of diffusion-controlled phenomena in solids and liquids. Solids covered include inorganic and organic glasses, glass-ceramic, ceramics, metals, and porous materials. Liquids covered include oxide and non-oxide glass forming melts, halides, and liquid metals. Both atomistic and mathematical approaches to diffusion processes will be emphasized. The course will include extensive discussion of measurement techniques and will deal with diffusion of both ionic and gaseous species. Diffusion under stress, thermal and electrical field gradients will be discussed in addition to diffusion under concentration of gradients.

CEMS 525 - Advanced Optical Behavior of Glasses 3 hours. The course will consider the optical behavior of glass. Topics covered will include the intrinsic band gap, effect of impurities on uv absorption, interionic charge transfer, electron and hole centers, wavelength dependent scattering, ligand field effects, dichroism, fluorescence, phosphorescence, glass lasers, metallic and semiconducting colloids, hydroxyl/hydride absorption, including optical dating of natural glasses, the multiphonon edge, isotope effects, intrinsic infrared absorption bands, interference effects, opalescent glasses, photosensitivity, photoconductivity, photochromism, photo/thermoluminescence, electrochromism, Faraday rotation, color filters, traditional optical glasses, and birefringence.

CEMS 526 - Surface Properties of Glass 3 hours. The theoretical background necessary for the understanding, prediction and modification of surface properties is provided. Non-crystalline materials are stressed. The course includes use of thermodynamic principles to predict the general chemical and mechanical behavior of glass under a wide variety of environments. Mathematical models provide quantitative descriptions of the performance of these materials in various applications. Individual topics include chemical durability, mechanical properties including environmental effects, friction, wear, grinding and polishing, and surface modification processes such as ion-exchange and de-alkalization processes.

CEMS 530 - Anisotropic Properties 3 hours. Introduction of anisotropic material properties and their relation to the symmetry of crystals, ceramics, and glasses, and composites. Presentation of properties in both matrix and tensor forms. Topics include equilibrium properties (e.g., permittivity, stress, permeability, piezoelectricity, and electro-optic response), transport properties (e.g., diffusivity, electrical conductivity). Maxwell relations, free energy expansions of response, ferroic properties, and harmonic effects.

CEMS 531 - Advanced Solid State Chemistry 3 hours. This course will explore, in detail, the relationship between structure, stoichiometry, and properties of solid materials. The subject will be approached through a thorough discussion of symmetry (both point and space groups) and crystal chemistry.

CEMS 532 - Atomistic Computer Modeling of Materials 3 hours.

CEMS 533 - Statistical Experimental Design 3 hours. Following a review and extension of ANOVA and regression, experimental design is introduced as an extension of statistical methods. Various standard designs and their analysis are introduced and applied to research and quality control situations. Factorials, fractional factorials, response surface designs and mixture designs are covered. Statistical process control, control charts, and optimization are introduced. Computer methods will involve some standard packages such as SPSS, JMP, IMSL on the mainframe, or software packages on computers in the College micro-computer labs.

CEMS 534 - Polymer Characterization 3 hours. An introduction to the scientific principles of synthesis, processing, characterization, and testing of polymeric materials. Relationship of polymer properties and performance to the underlying structure and synthetic conditions is emphasized by application of appropriate scientific approaches. Hands-on experience with structure-property characterization of polymeric materials is included in the required laboratory.

CEMS 536 - Physical and Mechanical Metallurgy 3 hours. Structure/processing/property relationships for metals with an emphasis on mechanical properties. Mechanical testing techniques and the effect of test temperature and strain rate on properties. Failure analysis, corrosion, fracture, fatigue, and creep. Brief introduction to the physical metallurgy of aluminum, titanium, magnesium and stainless steel alloys. Laboratory experiments emphasizing mechanical testing, heat treatment, and microstructural development.

CEMS 538 - Surfaces and Interfaces 3 hours. This course focuses on the underlying concepts for surface chemistry and the application of these concepts to everyday practice. Topics covered in this course include; molecular interactions at the interface, interaction forces, fluid interfaces, amphiphilic and polymer systems, crystalline solid surfaces, thin films, surface modification and surface analysis techniques.

CEMS 541 - Advanced Crystallography 3 hours. This course is intended to give the student a thorough grounding in the theory and application of modern diffraction and scattering methods. Kinematical and dynamical scattering theory will be covered, followed by single-crystal and advanced powder diffraction methods. Modern structure solution techniques, instrumentation and automation will be addressed. Further discussion of other scattering techniques will bring the student near the state-of-the-art in materials characterization using x-ray, neutron and electron scattering.

CEMS 542 - Advanced Optical Microscopy 3 hours. This course provides an advanced treatment of the use of optical microscopes in characterization of glasses and ceramics. Underlying principles of the interactions between light and materials are presented, and techniques of optical microscopy, which exploit these principles, are examined and practiced. Optical microscopes will be discussed by examining the function, adjustments, and design of individual components and by describing illumination techniques in detail.

In the laboratory, students will use a variety of microscopes and illumination techniques, including brightfield, darkfield, differential interference contrast, other interference techniques, phase contrast, and polarized-light. Photomicrography using film and digital image-storage systems will be covered, as will image processing and image analysis-using computers. Students will do prepared laboratory experiments (including measuring index of refraction, specimen preparation, optical strain measurements, and characterization of microstructures) and individual projects. There are two lectures and one lab each week.

CEMS 543 - Analytical Transmission Electron Microscopy 3 hours. A hands-on laboratory course, the class is oriented toward instructing students in the practical use and operation of the analytical electron microscope, to ultimately be applied to his/her thesis work.

CEMS 544 - Structure and Characterization of Glasses 3 hours. This course provides a general review of techniques for the characterization of glasses and glass-ceramics. Characterization is taken to include atomic and molecular composition and distribution (intrinsic and extrinsic species), morphology, phase (vitreous and crystalline) identity and concentration, thermal history, and properties which are commonly used to establish reproducibility of glass compositions. Techniques considered will include microscopy, x-ray analysis, spectroscopy, qualitative and quantitative chemical analysis, thermal analysis, surface analysis and profiling, and property measurements. Discussions include the principles behind each measurement, the equipment used, and the possible sources of error. Both qualitative and quantitative analysis are included wherever applicable.

CEMS 545 - Characterization in Materials Science and Engineering 3 hours. The course will provide the student with detailed knowledge of the interactions of electromagnetic radiation with matter. Particle probes used in materials characterization will also be considered. A theoretical approach to understanding the mechanisms of interaction will provide the foundation for understanding any of the plethora of materials characterization techniques, including capabilities and limitations.

CEMS 546 - Surface and Porosity Characterization 3 hours. Students should get familiar with various surface and porosity characterization techniques, e.g. ESCA, SIMS, Auger, DRIFT, temperature programmed desorption (TPD), electrophoresis, adsorption techniques, Hg-porosimetry, NMR, and permeability studies. The course will give a brief introduction to each of those techniques. Adsorption as well as several pore characterization methods will be discussed in more detail. The course should provide students with an overview of the general field as well as a more in depth discussion about some specific techniques. Several lab sections will provide a sufficient practical supplement to the theoretical concepts given in the lectures.

CEMS 550 - Independent Study 1-4 hours.

CEMS 551 - Fracture Fatigue, and Creep of Materials 3 hours. This course will cover the effects of microstructure on the fracture, fatigue, fatigue crack propagation, and creep behavior of engineering materials including metals, ceramics, polymers, and composites with a special emphasis on pure metals, single-phase alloys, multi-phase alloys and dispersion-strengthened materials. Fracture resistance, fracture toughness and methods to improve fracture behavior will be discussed in detail and various analytical techniques in the failure analysis of structural components will be presented.

Topics discussed will include static and dynamic brittle and ductile failures, crack initiation, fatigue life prediction, damage tolerance approach to component design, and microstructural and structural synthesis for optimum behavior. In addition to fatigue and fracture, this course will provide the student with the basic material behavior concepts which control high-temperature material properties. A comprehensive study of relationships between microstructure and high-temperature creep deformation will be presented to the student. The properties and applications of high-temperature materials will be discussed, especially of those materials used in the aerospace industry such as titanium and nickel-based alloys.

CEMS 552 - Composite Design and Fabrication 3 hours. This course will introduce the influence of materials, design and processing on composite properties. Discussions will include details on state-of-the-art fabrication technology and performance of continuous fiber reinforced composites. Reviews of the open literature will be presented concisely in order to understand and to identify approaches toward addressing composite materials limitations.

CEMS 553 - Mechanical Properties of Glasses and Ceramics 3 hours. Fundamental concepts concerning mechanical behavior are introduced and discussed with respect to their application to glasses and ceramics. Emphasis is placed on strength and fracture mechanics, and how processing and temperature affect mechanical properties. Testing procedures, including non-destructive evaluation techniques, and problems associated with them are treated in detail. Part of the semester is devoted to a discussion of recent developments in the area of mechanical properties.

CEMS 555 - Principles and Technology of Photonic Devices 3 hours.

CEMS 556 - Properties/Applications of Ferroelectrics 3 hours. The course starts with a basic discussion of polarization in a dielectric, reviews electrostatic boundary conditions and then develops the concept of domains with the occurrence of spontaneous polarization. Domain re-orientation is shown to develop anisotropic properties and frequency effects in the dielectric constant. The structural transitions are modeled with thermodynamic theory and soft mode concepts. The second part of the course is concerned with the effect of the symmetry of spontaneous polarization on the structure and properties. The properties are expanded into devices and the use of ferroelectric material as piezoelectrics, pyroelectrics, electro-optics, and dielectrics.

CEMS 563 - Advanced Cell Biology 4 hours. This course focuses on integrative and specialized cellular activities. Integrative cell functions include: cell-to-cell signaling, mechanical and structural properties, motility, and differentiation via specific interactions between cells. Specialized cellular activities include: molecular immunology, neuron structure and function, and the cellular bases of cancer. Four lectures with one reserved for discussion of current research publications.

CEMS 564 - Biochemistry: Proteins and Metabolism 4 hours. Properties, biosynthetic pathways, and metabolism of carbohydrates, lipids, and nitrogenous compounds with related units on physical biochemistry, protein structure, bioenergetics and enzyme kinetics. Laboratories reinforce theoretical concepts and provide hands-on experience with modern biochemistry techniques and instrumentation. Three lectures and one three-hour laboratory.

CEMS 565 - Biochemistry: Nucleic Acids 4 hours. This course surveys the molecular biology of the gene. Discussions of the latest paradigms for nucleic acid structure and function are presented. Topics include: regulation of DNA replication and transcription, post-transcriptional modification of RNA, chromatin structure, recombinant DNA techniques, functional genomics, and the latest genetic engineering methods. Four lectures with one reserved for discussion of current research publications.

CEMS 567 - Electrochemistry and Bioelectrochemistry 3 hours. Theory and applications of electrochemical principles to the interphase region unique to biological materials. Topics include a basic review of ionics and electrodics followed by a detailed discussion of electrochemical phenomena that result from the structure and function of biological surfaces from macromolecules to intact cells. Detailed models are developed for the cell surface, the extracellular matrix and other regions capable of electrochemical phenomena. Special attention is paid to electrochemical phenomena that may result from the interaction of biological and non-biological materials (biomaterials).

CEMS 568 - Biomedical Materials 3 hours. This course introduces the fundamental concepts and theories behind the choice of material for biological applications. Metals, polymers, ceramics and composites are covered. It brings together biology and materials science to get a better understanding of fundamental interactions that control the applicability of materials. Case studies of present material applications are used to illustrate the principles taught.

CEMS 569 - Advanced Biomedical Materials Engineering 3 hours. Advanced concepts in biomaterials with an emphasis on the current literature. Objectives for the course include: understand the testing, requirements and issues related to medical devices; review current and historic materials used in these medical devices; review current FDA guidelines for medical devices; be able to make logical recommendations for research concerning new materials for medical devices.

CEMS 660 - Research Seminar 1 hours. Students choose thesis areas and prepare literature surveys as part of the course. Required of all new graduate students.

CEMS 680 - Graduate Thesis 2-15 hours.

CEMS 685 - Graduate Internship 1-4 hours. Off-site internships with industrial, government or academic research laboratories are required for a minimum of 2 months. Funding will be provided by either the collaborating institution or the School. Examples of current contacts include Affymetrix, Arrow International, Cambridge Scientific, Food and Drug Administration, Orthovita, Owens Corning Fiberglass, U.S. Biomaterials, U.S. Surgical, Wilson Greatbatch, and Zimmer. We also have strong ties with international universities and companies; for example, we currently have internships available at the University of Modena in Italy.

CEMS 690 - Graduate Seminar 0 hours. Weekly lectures and discussions with visiting lecturers, faculty members, and graduate students. Required of all graduate students throughout their residence.

Chemistry

Graduate students may take these 400-level courses for graduate credit:

CHEM 400 - Advanced Chemistry Topics 1-4 hours. Special topics not covered by regular course work. One or more special topic courses will be offered most years. Students in consultation with a faculty member may design their own special topics courses. All special topics courses must have the written approval of the Division Chair and should in general meet the criteria of the American Chemical Society's requirements for an advanced course. Prerequisite: CHEM 346, although this can be waived at the discretion of the Division Chair.

CHEM 414 - Advanced Inorganic Chemistry 3 hours. Advanced concepts of group theory and descriptive chemistry of the transition elements. Other topics include surveys of organometallic and bioinorganic chemistry. Prerequisites: CHEM 346 or equivalent and CHEM 372 or permission of instructor. (Sufficient demand)

CHEM 420 - Biochemistry: Proteins and Metabolism 4 hours. Properties, biosynthetic pathways, and metabolism of carbohydrates, lipids, and nitrogenous compounds with related units on physical biochemistry, protein structure, bioenergetics and enzyme kinetics. Laboratories reinforce theoretical concepts and provide hands-on experience with modern biochemistry techniques and instrumentation. Three lectures and one three-hour laboratory. Prerequisite: Either [BIOL 252 and CHEM 315/316] or [BIOL 202, (CHEM 343 or CEMS 235), and (CHEM 310 or CHEM 315)]. (Cross-listed as BIOL 420)

CHEM 422 - Biochemistry: Nucleic Acids 4 hours. This course surveys the biochemistry of the gene, with an emphasis on protein/nucleic acid interactions. Topics include nucleic acid structure, regulation of DNA replication and transcription, post-transcriptional modification of RNA, recombinant DNA techniques, and genetic engineering methods. Three hours lecture and one three-hour laboratory. (Students who wish to take only one semester of Biochemistry should take BIOL/CHEM 420.) Prerequisite: BIOL 252; BIOL 372 recommended. (Cross-listed as BIOL 422)

CHEM 423 - Instrumental Analysis 3 hours. The theory and practice of modern instrumentation techniques and methods used in chemistry are presented. An in-depth look at spectroscopic, separation, and electrochemical methods and their associated instrumentation follow an introduction to instrumentation; interpretation of results is also covered. Required for chemistry majors. Prerequisites: CHEM 321 and CHEM 346 or equivalent.

CHEM 457 - Advanced Organic Chemistry 2 hours. Organic reaction mechanisms and stereochemistry. Other topics may be included, depending upon the interests of those enrolled. Prerequisite: CHEM 316 (Alternate years)

CHEM 461 - Advanced Chemistry Laboratory I 2 hours. A laboratory course integrating synthesis, purification, analysis, and characterization of chemical species. Synthetic work includes use of controlled atmospheres, high temperatures and non-aqueous systems. Purification of compounds is by distillation and recrystallization, as well as by various chromatographic techniques. Analysis and characterization include both wet chemical and instrumental techniques. Co-requisite: CHEM 423. Prerequisites: CHEM 321 and CHEM 346 or equivalent.

CHEM 462 - Advanced Chemistry Laboratory II 1-2 hours. A more advanced laboratory course with the same goals as CHEM 461. (Sufficient demand)

Prerequisite: CHEM 461.

Graduate Courses:

CHEM 515 - Organic Chemistry I 4 hours. An introduction to the chemistry of carbon compounds, including the preparation of typical compounds and a study of their properties, reactions, and uses.

CHEM 516 - Organic Chemistry II 4 hours.

CHEM 520 - Chemical Principles 3 hours. A guided reading and problem solving course designed to develop a thorough understanding of the basic chemical principles essential for secondary school chemistry courses. It covers stoichiometry reaction types, atomic theory, bonding models, molecular shape, thermodynamics, kinetics, equilibrium, liquids and solids, solutions, and electrochemistry. This course is normally taken in conjunction with a teaching assistant position for CHEM 105/106. Prerequisite: Graduate students in education with emphasis in chemistry. (Sufficient demand)

CHEM 550 - Independent Study 1-4 hours. Hours to be arranged.

Community Services Administration

CSAD 511 - Interpersonal and Group Processes 3 hours. This course enhances communication skills and effective participation in interpersonal and social processes through heightened awareness of the various facets of interpersonal processes and communication patterns.

CSAD 515 - Managerial Communication Skills 3 hours. The principal goal of this course is to improve the communication skills of administrators. The course teaches administrators how to analyze the rhetorical context of the workplace and to prepare effective strategies of oral and written communication that address those needs. Reading, oral presentations, and short papers help develop these necessary skills.

CSAD 525 - Community Planning: Theory and Practice 3 hours. The course focuses on the theory and practice of community planning. The course considers both comprehensive planning and functional areas of concern including economic development, human services, environmental and community facilities planning. These topics are examined in terms of the prevailing political and institutional context and in recognition of planning as a process of determining community values.

CSAD 526 - Financing State and Local Governments 3 hours. This course examines the economic role of state and local governments and the institutions for financing revenues and the rules that govern expenditures. Economic effects of governmental decisions and alternative instruments of financing are analyzed.

CSAD 527 - Managerial Economics 3 hours. This course applies economic principles to the operating decisions that managers must make in public and not-for-profit agencies. It attempts to focus attention on the macroeconomic factors effecting the enterprise's environment as well.

CSAD 531 - Political Environment of Community Services 3 hours. This course presents an overview of the political framework within which community service agencies operate; provides an understanding of some of the problems involved in implementing community service programs through the governmental structure; indicates where and how political decisions are made involving community services; and increases the student's ability to interact with his/her agency's political environment.

CSAD 534 - Political and Legal Environment of New York State 3 hours. This course examines the legal and political processes of New York State government and the institutional structure through which they function. It focuses on factors affecting the state policy process and the position of the agency administrator in that process.

CSAD 535 - Issues in Health Care Delivery 3 hours. This course examines a range of contemporary health care delivery issues, notably: the impact of the AIDS crisis; the rationing of health care resources in the US; the debate over health care coverage for the elderly; and a comparison of the American health care system with other national systems, with special references to the Canadian approach.

CSAD 541 - Basic Program Evaluation 3 hours. This course introduces the analysis of research design and basic statistics and gives community services personnel the background to read and judge professional evaluation research as well as the ability to design and carry out basic program evaluation.

CSAD 550 - Independent Study 1-4 hours.

CSAD 561 - Organizational Processes 3 hours. This course examines organizational problems in the delivery of human services at the local level including health care, public safety, education, counseling, rehabilitation, information and referral, and legal assistance. Organizational processes are analyzed in relation to the distinct goals and environmental and technological characteristics of client processing organizations.

CSAD 565 - Computer Applications for Community Services Administration 3 hours. The application of computers to administrative problem solving is examined through such topics as the structure and function of computing systems, administrative applications, the availability of computing resources, and the actual use of a computer language for data analysis.

CSAD 566 - Management Information Systems 3 hours.

CSAD 571 - Agency Management 3 hours. This course is intended for those who either are or who may become responsible for managing community service agencies. The emphasis is on the practical skills necessary for planning, problem analysis, and decision-making.

CSAD 573 - Program Implementation 3 hours. Examines the process of program implementation from the perspectives of organizational theory and the practicalities of the American governmental and political systems. The student is encouraged to understand the difficulties in program implementation and the need for a broad perspective on administration in order to achieve more effective implementation.

CSAD 575 - Grants for Public and Non-Profit Organizations 3 hours. This course focuses on the role of grants in public and non-profit organizations with emphasis on: 1. techniques and resources of grantsmanship; 2. the importance of grants and grantsmanship in the overall scheme of program planning and organization development; 3. the politics of grantsmanship with particular focus on inter/intra-organizational relationships.

CSAD 581 - Human Resources Administration 3 hours. This course develops skills for designing and implementing human resource systems; analyzes the importance of human resources to organizational performance; and examines current issues in human resource management.

CSAD 590 - Fieldwork in Community Services 3 hours. This course is required of CSA students who have not had experience in a community service agency. Students intern in a community service agency under the guidance of a faculty member and an agency supervisor.

CSAD 592 - Management Information Services 3 hours. This course will give the student a fundamental and theoretical foundation for management information systems. The student will investigate major resources for information systems, apply methodologies of systems analysis, become familiar with the factors essential to the management of information systems, and explore the importance of recent developments in these systems.

CSAD 593 - Health Policy 3 hours.

Counseling

COUN 600 - Special Topics in Counseling 1-3 hours.

COUN 601 - Foundations of Cultural Diversity 1 hour. As frontline practitioners in schools and human service agencies, counselors are often faced with cultural issues on a daily basis. It is essential that school and community based counselors develop an appreciation for cultural diversity and an understanding of how cultural diversity issues interact with the practice of counseling. This course is intended as an introduction to cultural diversity issues and their impact on the major areas of practice within schools, agencies, and higher education. Upon completion of this course, students will have acquired knowledge regarding cultural issues that provide a foundation for exploring these issues in the counseling specialization courses.

COUN 602 - The Profession of Counseling 3 hours. This course helps the student begin establishing professional identity as a counselor. Areas explored include professional roles, settings, functions, goals and objectives, organizations, history, ethics, and credentialing. Comparisons will be made between counseling in textbooks and in the "real world."

COUN 603 - Issues in Agency Counseling 3 hours. This course focuses on contemporary issues facing counselors in a variety of counseling agencies. Topics include counseling clients with eating disorders, depression, survivors of incest, date rape, alcohol problems. ACOA, etc. Students also become familiar with diagnostic and statistical manual of mental disorders; consultation issues and managing office politics. Prerequisite: COUN 602 and 636.

COUN 604 - Issues in School Counseling 3 hours. This course focuses on current guidance and counseling issues that are important to beginning school counselors. Examples of such issues include the CSE and IEP planning, course scheduling, working with BOCES, and managing time constraints. Prerequisite: COUN 602 and 636.

COUN 605 - Career Development and Life Planning 3 hours. Students learn how career development theories, occupational and educational information, vocational tests, sociological and economic factors, and family dynamics all relate in helping their clients to make career and life style career decisions. Students also spend time practicing skills directly related to career counseling. Prerequisite: COUN 602 and 636.

COUN 606 - Human Development: The Lifespan 3 hours. This course acquaints the student with the interplay of psychodynamics, behavioral, sociocultural, cognitive and interpersonal theories of development. These factors are examined as they combine to explain personality and cognitive functioning across the life span. The student will learn to relate development theory and research to professional practice in educational and clinical settings.

COUN 607 - Issues in College Student Development 3 hours. This course will introduce students to issues and principles of practice in the college student personnel field. Topics may include developmental tasks of college students, counseling and the college student, and practices in a cross-section of areas in student affairs, including admissions, financial aid, student activities, residence life, and career development. Prerequisites: COUN 602 and 636.

COUN 616 - Mental Health, Exceptionality, and Disability 3 hours. This course covers the range of physical, cognitive, communication, and social/emotional exceptionalities in human development from childhood to early adulthood. One focus will be on understanding mental health and psychopathology from the perspectives of risk and resilience. A second focus is on understanding the commonalities, not just the differences, between children and youth with disabilities and their non-disabled peers.

COUN 617 - College Students with Disabilities 3 hours. This course will focus on effective service provision for college students with disabilities. Topics will include the Americans with Disabilities Act, identification of and intervention with various disabilities, development of systems of support, and faculty consultation. Prerequisites: COUN 602, 606, and 636.

COUN 618 - Administration of College Student Development Services 3 hours. This course will focus on administrative and leadership skills in the student affairs field, including residence life, college counseling, student activities, college counseling, and career development. Topics to be addressed include strategic planning, staff development, budget development and tracking, personnel management, and Affirmative Action policies. Prerequisites: COUN 602, 606, and 636.

COUN 619 - Program Development and Grantsmanship 3 hours. This course will introduce students to fundamentals of program development and grantsmanship in the counseling field. Emphasis will be on techniques of successful proposal writing, funding opportunities at the local/state/federal level, grant administration, and building programs through collaborative teams of faculty, students, and school and agency personnel.

COUN 620 - Special Topics in Schooling I 1-3 hours.

COUN 625 - Special Topics in Schooling II 1-3 hours.

COUN 626 - Psychological Testing 3 hours. This course teaches students how to effectively evaluate the usefulness of tests and inventories and how to integrate testing into the counseling process. Such measurement issues as reliability, validity, and standard error of measurement are covered. Students also become familiar with the most frequently used personality, educational, clinical, intelligence and special population instruments, as well as testing ethics. Time is spent practicing test interpretation with other students. Materials fee: \$25.

COUN 630 - Special Topics in Counseling Assessment I 1-3 hours.

COUN 635 - Special Topics in Counseling Assessment II 1-3 hours.

COUN 636 - Principles of Counseling 3 hours. This course focuses on teaching students the process and theories of counseling. Students also spend time practicing skills directly related to the helping process.

COUN 637 - Group Dynamics 1 hours. The focus is on developing an understanding of the group process and its evolution, including basic group concepts and their applications. Students are involved in the process as they experience and then conceptualize group processes. An integral part of the experience is the student's engagement in self-examination.

COUN 638 - Advanced Counseling Theory and Practice 3 hours. This course emphasizes the integration, by the student, of counseling theory and counseling practice. The aim is an expansion of both knowledge and skill. Counseling theories will be studied in light of their applicability to skill development. Prerequisite: Permission of the instructor.

COUN 639 - Group Counseling 3 hours. This course emphasizes the understandings and skills necessary to plan, organize, lead, and evaluate counseling groups. Attention is given to recent research and current issues related to groups in the helping professions. Students need access to counseling groups at the time of the course. Prerequisites: COUN 637 and permission of the instructor.

COUN 640 - Special Topics in Counseling Intervention I 1-3 hours.

COUN 642 - Multi-Cultural Counseling 3 hours. An exploration of the considerations and issues involved in counseling persons from different cultural, religious, racial-ethnic, and gender/gender oriented groups. There is a focus on heightening an awareness and appreciation of difference.

COUN 645 - Special Topics in Counseling Intervention II 1-3 hours.

COUN 648 - Advanced Seminar in Consultation 3 hours.

COUN 650 - Independent Study 1-3 hours.

COUN 655 - Special Topics in Counseling Intervention III 1-3 hours.

COUN 656 - Counseling Pre-Practicum 1 hours. This course will acclimate students to the environment in which the counseling experience occurs through a series of site visits (minimum of 5) to schools, mental health agencies, and/or colleges/universities. Interview summaries, detailed analyses, and other relevant counseling experiences are a part of the course. Continued orientation to the role of the professional counselor and ethical concerns will also be discussed. Students will practice the basics in terms of active listening skills and the use of appropriate counseling techniques through role-plays and other activities. Prerequisites: COUN 602 and 636.

COUN 657 - Practicum in Counseling I 2 hours. The student is required to spend a minimum of 100 clock hours at a selected school, agency or college/university, working under supervision with clients/students. During that time, the student is expected to increase his or her competence in the areas of basic interviewing, assessment, and counseling skills. Furthermore, the student will be made more aware of the ethical, legal, and professional issues inherent in the counseling process. The student is provided practical, on-the-job, supervised and evaluated field experiences that provide the foundation for internship experiences. A weekly seminar class accompanies the fieldwork experience, which will focus on discussion of the theory and practice of supervision vis-a-vis the practicum. Prerequisite: COUN 656.

COUN 658 - Practicum in Counseling II 3 hours. This is a continuation of COUN 657, with the exception that the student is required to spend a minimum of 200 clock hours at a selected school, agency or college/university, working under supervision with clients/students. Students continue to develop conceptual and professional skills related to their practice at a field site. Again, a weekly seminar class accompanies the fieldwork experience. Prerequisite: COUN 657.

COUN 660 - Special Practicum I 1-3 hours.

COUN 661 - Advanced Practicum I 1-3 hours.

COUN 662 - Advanced Practicum II 1-3 hours.

COUN 665 - Special Practicum II 1-3 hours.

COUN 667 - Internship in Agency Counseling 12 hours. The student experiences the actual counseling practice by performing a wide range of counselor functions and activities in a field-training site. The site may be a social service agency, mental health clinic, veterans counseling service, or any other approved counseling setting. Site supervision is provided by a certified or licensed field supervisor. The student is expected to spend five full days each week at the site (525 clock hours), in addition to participating in a regular seminar on campus. Permission of the instructor is required. Prerequisite: Qualifying examination and satisfactory completion of the master's degree.

COUN 668 - Internship in School Counseling 12 hours. The student experiences the actual practice of a school counselor by performing in a wide range of counselor functions and activities in a public school. Site supervision is provided by a certified school counselor. The student is expected to spend five full days each week at the school (525 clock hours), in addition to participating in a regular seminar on campus. Permission of the instructor is required. Prerequisite: Qualifying examination and satisfactory completion of the master's degree.

COUN 669 - Internship in College Student Development 12 hours. The student experiences the actual practice of working in a college student development setting by performing a wide range of counselor functions and activities in a college or university. Supervision is provided by a student services professional at the field site. The student is expected to spend five full days each week at the assigned site (525 clock hours), in addition to participating in a regular seminar on campus. Permission of the instructor is required. Prerequisite: Qualifying examination and satisfactory completion of the master's degree.

COUN 671 - Research and Statistics I 3 hours. The course introduces the analysis of research design and basic statistics and gives the student the background necessary to read and judge professional evaluation research as well as the ability to design and implement basic program evaluation.

COUN 675 - Special Topics in Research and Statistics I 1-3 hours.

COUN 680 - Special Topics in Research and Statistics II 1-3 hours.

COUN 685 - Special Advanced Seminar I 3 hours.

COUN 690 - Special Advanced Seminar II 3 hours.

COUN 695 - Topics in Counseling/Internship Seminar 3 hours. This seminar accompanies the full-time internship, and will examine professional issues encountered in the internship setting, and provide group supervision during the internship experience. Intensive study of theories, research, and practice will be based on applied issues that arise for the professional counselor. Co-requisite: COUN 667, 668, or 669.

Criminal Justice Studies

CRIM 501 - Social Control, Corrections and Rehabilitation 3 hours. CSA graduate elective. An examination of social control networks and the societal trends that influence the organizations comprising the control network. Special emphasis is given to the analysis, management and evaluation of correctional and rehabilitative human service agencies.

Education

Graduate students may take these 400-level courses for graduate credit:

EDUC 460 - Seminar in Teaching and Professional Development 3 hours. Taken concurrently with EDUC 461, this course addresses general issues of professional development of educators. Topics will include, but are not limited to, advanced uses of technology in the classroom, classroom management, teaching learning process, and issues of professionalism.

EDUC 471 - Methods of Teaching Literacy 6 hours. A study of the current trends and innovative methods in teaching literacy in the elementary school. The areas of word identification, comprehension, and process writing for all students, including those with special needs, will be covered. Prerequisite: Admission into the Early Childhood/Childhood Education Program.

EDUC 472 - Competency Skills in Teaching Literacy 3 hours. This course gives students an opportunity to demonstrate achieved competency skills for teaching literacy at the Early Childhood/Childhood level. Attention will be given to the current New York State Learning Standards and how to incorporate these standards into the curriculum. Prerequisite: EDUC 471 and admission into Student Teaching in Early Childhood/ Childhood Education.

EDUC 473 - Assessment in the Early Childhood/Childhood Classroom 3 hours. This course examines assessment procedures, strategies, and techniques used and constructed for early childhood/childhood classroom teaching and learning purposes. Traditional and nontraditional means of assessment will be explored and an emphasis is placed on the alignment of assessment, instruction and content.

EDUC 489 - Current Teaching Methods: Adolescent Subjects 3 hours. Discussion of goals, methods, and materials used to successfully teach middle/adolescence and special subjects. Classroom observation required. Prerequisite: Permission of instructor.

Graduate Courses:

EDUC 500 - Special Topics in Education 3 hours.

EDUC 503 - Competency in the Teaching of Literacy 3 hours. Study of theories of literacy development and strategies appropriate to teaching literacy in the early childhood and childhood classroom. Topics covered include strategies for teaching emergent literacy, word identification, phonics, phonemic awareness, meaning, comprehension, instructional materials, and identifying instructional needs.

EDUC 504 - Diagnostic and Remedial Techniques in Literacy 3 hours. Provides students with in-depth knowledge of procedures for assessing specific literacy problems, and strategies for the correction of reading difficulties of students within a broad range of disabilities. At the conclusion of this course, teachers should be able to administer and interpret several diagnostic instruments and communicate these results to parents and be able to design literacy programs at all areas of literacy at the early childhood and childhood levels. Pre- or co-requisite: EDUC 503. Field component required.

EDUC 505 - Literacy in the Content Areas 3 hours. The emphasis is on the application of literacy to subject area learning. It takes a balanced approach, providing a realistic and practical treatment of literacy as related to text review. Literacy strategies in content areas and study techniques are examined.

EDUC 506 - Literacy Practicum 6 hours. This course assists teachers in the diagnosis and remediation of reading problems in a clinical setting. Each teacher, working with several children, designs and implements a remediation program based on task analysis. Enrollment limited. Prerequisites: EDUC 503, 504, 505. (Offered only in Summer)

EDUC 507 - Literacy Seminar and Field Experience 6 hours. Emphasis is placed on the selection of literacy materials, grouping practices and literacy strategies for small and large groups in a public school setting. This experience coordinates the literacy curriculum with various school personnel and stresses the development of parental programs at the early childhood and childhood levels.

EDUC 508 - Advanced Literacy Practicum 6 hours. This program is designed for reading teachers and supervisors who have attended the basic reading clinic but who desire additional training in diagnosis, remediation, program planning, and supervision. In the advanced clinic, with the assistance of the professor, the reading teacher plans and implements a remedial program for children who have serious reading disabilities. Prerequisite: EDUC 506. (Offered only in Summer)

EDUC 513 - Literature for Children 3 hours. A practical approach to the study and selection of children's books. The riches of classical and contemporary writings are overviewed for classroom use. Various approaches to working with children and books are introduced as well as how literature can be integrated into the early childhood curriculum.

EDUC 528 - Human Development: The Lifespan 3 hours. This course acquaints the student with the interplay of psychodynamics, behavioral, sociocultural, cognitive and interpersonal theories of development. These factors are examined as they combine to explain personality and cognitive functioning across the life span. The student will learn to relate development theory and research to professional practice in educational and clinical settings.

EDUC 541 - Current Issues in Education 3 hours. This course explores various educational philosophies, as well as contemporary issues. It is helpful to early childhood and childhood as well as middle and adolescent school teachers. Project SAVE Workshop included.

EDUC 542 - The Teaching-Learning Process 3 hours. This course is an investigation of relationships between the teaching process and the principles of learning. The emphasis is on having the students expand their repertoire of instructional strategies and thus increase their own teaching effectiveness within the learning environment.

EDUC 543 - School Safety I 3 hours.

EDUC 544 - School Safety II 3 hours.

EDUC 550 - Independent Study 1-4 hours.

EDUC 571 - Teaching Numeracy 3 hours. This course will introduce the core numeracy topics as the ways and means in which quantitative information is communicated. Teachers must be able to bring quantitative reasoning and analysis into their disciplines in an effective organized manner. This course will concentrate on successful integration of these techniques and relevant technology in the various subject areas, emphasizing the importance of solid mathematical skills across the disciplines as well as an arsenal of aids in helping students to incorporate these skills.

EDUC 572 - Teaching with Data: Functions and Statistics 3 hours. This course builds upon EDUC 571 and focuses on handling data. Society is awash with data found in tables and charts in newspapers, magazines, television, and especially through the internet. Handling data in the classroom will be demonstrated through modeling with functions and other basic statistical techniques. Examples from across the curriculum will make this course relevant for teachers of all disciplines and grade levels. Excel will be used as the principle technological tool.

EDUC 573 - Assessment and Learning Theories in Numeracy 3 hours. This course will focus on identification of individual student problems and difficulties with quantitative reasoning and communication; and on successful remediation strategies. These main objectives will broaden the teacher's perspectives about the philosophical and theoretical foundations of assessment and allow them to develop and implement alternative assessment methods related to student learning. A variety of learning theories will be explored on the current state of research in numeracy education, including gender and social influences on mathematical participation.

EDUC 574 - Doing Science: Materials in Society 3 hours. In this course students learn and apply key mathematical concepts as necessary and fundamental parts of science, life, and the course itself; through the use of materials science, a historic strength of Alfred University, as the science exemplar and basis. The bulk of the quantification content lies in the laboratory portion where various mathematical calculations and techniques are introduced and applied to quantify and understand the measured results and experiments. Mathematics in the form of ratios, exponential notation, fractions, percent, and unit conversions/use are also essential to the lectures. These mathematical components of the course strengthen the course goals: 1) To increase student understanding and awareness of science in their lives. 2) To provide a positive science experience to reduce pre-existing aversions. 3) To understand the systematic and logical progression that undergirds all science. 4) To develop an appreciation that science should be understandable to everyone and that it must be quantitative and repeatable to be science.

EDUC 590 - Teaching Writing in Public Schools 3 hours. Teaching writing in the grades and high school can be an absorbing, even exciting, experience. You will hone your own skills while learning some new techniques in this course.

EDUC 592 - Developing Literacy Comprehension in Children 3 hours. This course focuses on how to teach children to comprehend and retain what they have read. It involves study of both the micro processes and macro processes of reading. We will examine current best practices in the field, and discuss their application in classrooms today.

EDUC 593 - Use of Technology in the Classroom 3 hours. This course will provide current and pre-service teachers with the skills and techniques to integrate new teaching and learning strategies, technologies, and assessment procedures into the classroom curriculum. This course will focus on using technology to foster higher level learning outcomes and to meet the New York State Learning Standards.

EDUC 598 - Student Behavior and Learning 3 hours. In the context of Character Education, this course will examine general principles from learning theory, group dynamics, behavior management and instruction, and extract concrete strategies for effective classroom management and productive learning environments.

EDUC 635 - Research in Higher Education: A Seminar 3 hours.

EDUC 680 - Thesis 3 or 6 hours.

EDUC 695 - Master's Project 3 hours. Designed to be a culminating project for those who have completed the majority of coursework in the program. May be designed with special research or practical orientation.

Special Education

SPED 545 - Learning Disabilities 3 hours. This course reviews current research on educational programs for children with a full range of disabilities. Major issues, theories and their practical applications, and assistive technologies are discussed.

SPED 556 - Human Development: Exceptionality 3 hours. This course provides both theoretical background and application techniques for developing both theoretical background and application techniques for developing sensitive and effective classroom management. Behavior management and other methods used to create positive teaching learning settings for students are emphasized. The course focuses on the application of techniques in school environments.

SPED 558 - Managing the Classroom 3 hours. This course provides both theoretical background and application techniques for developing sensitive and effective classroom management. Behavior management and other methods used to create positive teaching learning settings for students are emphasized. The course focuses on the application of techniques in school environments.

Electrical Engineering

ELEC 500 - Topics in Electrical Engineering 2-4 hours. Special topics in electrical engineering which vary from year to year.

ELEC 510 - Computer Architecture 3 hours. This course introduces the fundamentals of the modern processor design through qualitative and quantitative analysis. Both hardware and software design aspects are discussed. The main topics include economics of scaling, pipelining, memory segmentation and performance, instruction set design, and performance optimization. The course includes a design project, implemented in VHDL, that utilizes the topics discussed in class.

ELEC 520 - Communication Systems Engineering 3 hours. Theories of communications, types of communication systems, modulation principles, multiplexing techniques and data transmission are among the topics covered.

ELEC 522 - Control Systems 3 hours. Linear feedback control system modeling, analysis, and controller design. Design of state variable systems: controllability and observability, and pole placement using state feedback. Robust control systems: system sensitivity, analysis of robustness, and system with uncertain parameters.

ELEC 524 - Digital Control Systems 3 hours. Discrete time systems and the z-transform, sampling and stability analysis techniques, digital controller design, microcomputer implementation of digital systems, quantization and roundoff noise analysis. Pole assignment design and state estimation, controllability and observability, and linear quadratic optimal control.

ELEC 542 - Applied Electromagnetism 3 hours. Complex vectors, Maxwell's equations, uniform plane waves, reflection and transmission of waves, waveguides and resonators, transmission lines, antennas, special topics in waves, electrostatic fields, electric force and energy, special techniques to solve electromagnetic equations, direct currents, magnetostatic fields, magnetic circuits, electroquasistatic fields, magnetoquasistatic fields, examples of applications.

ELEC 544 - Optical Fiber Communication Systems 3 hours. Basic optical fiber communication components including optical fibers, optical transmitters, and optical receivers; basic concept of analog and digital signals, channel multiplexing, and modulation; geometrical-optics description, wave propagation, dispersion, and fiber loss; system design and performance.

ELEC 545 - Advanced Photonics Experiments 3 hours. Thin film coating theories and practices, examples including RF sputtering and plasma deposition, optical filters, optical fiber communication experiments, optical amplifiers experiments, ring laser experiments, thin film wave guide experiments.

ELEC 546 - Optoelectronics 3 hours. Review of the nature of light, the wave equation, polarization, interference, superposition, diffraction. Optical Fibers: Structures, Waveguiding, and Fabrication. Signal loss in optical waveguides: Absorption, scattering, and bending losses. Material and waveguide dispersion. Inter- and intra-modal dispersion. Review of the band nature of solids. Light sources, light emitting diodes, laser diodes. Photodetectors. Principles of photodiodes, noise in detectors. Photoreceivers, signal transmission and recovery. Digital transmission systems, power budgets, coherent optical communication systems.

ELEC 547 - Optical Fiber Communication Systems 3 hours. Optical fiber communication systems involving three basic components such as optical fibers, optical transmitters, and optical receivers; electromagnetic modes in cylindrical optical fibers, basic concept of analog and digital signals, channel multiplexing, and modulation; geometrical-optics description, wave propagation, dispersion, and fiber loss; system design and performance.

ELEC 550 - Independent Study 1-4 hours.

ELEC 562 - Superconducting Electronics 3 hours. Metals, alloys and ceramics in the superconducting state; London, Ginzburg-Landau and BCS theories; High TC superconductor theories such as Anderson's RVB model, types I and II, and high TC superconductors. Applications in power generation and transmission, computers, magnetic field control systems, Josephson junctions, SQUID.

ELEC 563 - Plasma Engineering 3 hours. Single particle motions, plasma as fluids wave in plasmas, diffusion and resistivity, equilibrium and stability, kinetic theory, nonlinear effects, induction circuits, power supplies, auxiliary equipment, design, applications.

ELEC 566 - Advanced Topics in Fuzzy Logic 3 hours. The main objective of the course is to introduce approximate reasoning and its applications in solution of engineering problems. The general rules of logic and implication, computational aspects of fuzzy inference, and the mathematics of process are discussed. Various methods of defuzzifications and their applications in control schemes are discussed in detail. The course includes a control project with a fuzzy logic based decision structure. Strong calculus background, programming skills, and some knowledge of controls are presumed.

ELEC 568 - Advanced Topics in Genetic Algorithms 3 hours. Genetic Algorithms, GA, is a collection of search and optimization techniques that function according to the evolutionary processes. Simple GA, classifier systems, GA with variable population size, and GA in machine learning context are introduced.

Also, selected applications in optimization techniques and prediction methods are discussed. This course is a project-oriented course.

ELEC 569 - Expert Systems 3 hours. Expert Systems is a project-based course that explores the application of artificial intelligence concepts in real life engineering problems. The course is primarily intended for students who have completed at least one of ELEC 466, ELEC 566, ELEC 474, or ELEC 574. Topics of discussion and techniques to explore include rule-based systems, modern control schemes, knowledge growth, and machine learning.

ELEC 572 - Image Processing 3 hours. Digital image processing, partial coherence, transform, signal processing, modulators and detectors, image plane impulse functions, Fourier transform, equalization, edge detection, convolution, restoration, projection-slice, tomography, compression, examples such as MRI images.

ELEC 574 - Electric Machinery 3 hours. Engineering electromagnetic theories, in particular magnetic theory and circuits, three phase circuits, electro-mechanics, electric energy to mechanical energy conversion, applications of phasors, transformers, motors, generators, power electronics devices and controls.

ELEC 576 - Advanced Electrical Energy Systems 3 hours. Advanced systems for electrical energy, fuel cell power systems, solar cell power systems, and wind-electricity power systems. Principles of fuel cells, various types of fuel cells, energy conversion mechanism.

ELEC 578 - Electric Power Systems 3 hours. History of power in electric utilities and industry, present and future trends. Introduction to computer programming/modeling techniques currently used in power system engineering. Phasors, complex power, matrix operations, three-phase power, symmetrical components, power transformers, power transmission lines, powerflows, faults, power system controls and transients. Field trips to industry, time permitting.

ELEC 579 - Power Systems Protection 3 hours. Lightning and switching surge phenomena and protection. Protective relay types and characteristics. Protection schemes. Backup protection schemes. Special relay types.

ELEC 584 - Analog VLSI Design 3 hours. Introduction to the analog component of integrated circuit design. Transistor circuits, current sources and mirrors, differential operational amplifiers, comparators. Switched capacitor techniques. Analog-to-digital/digital-to-analog conversion, analog signal processing.

ELEC 586 - VLSI Design 3 hours. Design of VLSI circuits concentrating on CMOS technologies. Logic design, fabrication principles, CAD layout and introduction to VLSI systems architecture. Structured design emphasis will be with the concept of hierarchy. Design methodology will focus on design of VLSI subsystems using advanced hierarchical design tools including Verilog HDL. This will be in the form of class homework and short projects.

ELEC 587 - Laser Theory and Application 3 hours. Maxwell Equations, wave mechanics, atom-field interaction, stimulated emission and dipole oscillators. Semi-classical Laser theory, multi-mode operation, gas laser theory, ring laser, Zeeman laser. Applications of YAG and Excimer lasers.

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ELEC 588 - Applied Complex Variables 3 hours. Complex numbers, algebra, functions and integration. Taylor and Laurent series, theory of residues, conformal mapping and the Schwarz-Christoffel transformation. Applications to fluid dynamics, electrostatics, and electrical machines. Impulse functions. Applications to Fourier transforms and the inversion of the Laplace transform. Some linear algebra and matrix theory introduced as needed for an understanding of dynamic systems.

ELEC 660 - Research Seminar 1 hours.

ELEC 680 - Graduate Thesis 2-15 hours.

ELEC 685 - Graduate Internship 1-4 hours.

ELEC 690 - Graduate Seminar 0 hours.

ELEC 699 - Master's Project 3 hours.

English

ENGL 501 - Literature for the Secondary School 3 hours. Literature for high school student and the methods of analysis which can be used to approach it. Writers such as Shakespeare, Dickens, Hawthorne, Frost, Fitzgerald, Hemingway, Steinbeck, Golding, and Salinger. Students evaluated on papers, exams, and classroom performance.

ENGL 520 - Topics in Literature 3 hours. Topics in literature suitable for the secondary school, and methods of analysis which can be used to approach them. Such topics as Twain/Crane, the Twenties in American Literature, and Biography in American Minority Groups offered. Evaluation based upon papers and classroom performance.

ENGL 550 - Independent Study 1-4 hours.

English as a Second Language

Graduate students may take these 400-level courses for graduate credit:

ESL 401 - Speaking and Listening 2 hours. This course will help non-native English speakers improve their speaking and listening skills. Students will work on pronunciation, oral presentation, and extracting meaning from conversations and other kinds of extended discourse.

ESL 402 - Writing Academic English 2 hours. This course will help non-native English speakers improve their writing skills. Students will work on a variety of academic writing projects related to their disciplines. Grammar and usage problems specific to academic writing will be addressed in relation to specific projects.

Geology

GEOL 524 - Clay Mineralogy 2-3 hours. Theoretical and applied aspects of the nature of clay minerals are addressed through lectures, discussions, readings, and original research.

Topics include the structure and chemistry of clay minerals; their origin, paragenesis, classification, and identification; the weathering and alteration of minerals; properties and morphologies; and techniques used in clay mineral analysis. Knowledge of a programming language is desirable. (Alternate years)

Mathematics

Graduate students may take these 400-level courses for graduate credit:

MATH 400 - Topics in Mathematics 1-4 hours. Special topics in mathematics which vary from year to year. Prerequisite: Permission of department. (Sufficient demand)

MATH 401 - Advanced Engineering Mathematics 4 hours. Fundamental concepts of applied analysis including Fourier series and integrals, Laplace transforms, partial differential equations and boundary value problems and special functions. Prerequisite: MATH 271.

MATH 421 - Numerical Mathematics 4 hours. An introduction to numerical methods including solution of linear systems and non-linear equations, interpolation and approximation of functions, numerical integration and numerical solution of differential equations. Prerequisite: MATH 253.

MATH 461 - Geometry 4 hours. An introduction to both Euclidian and non-Euclidian geometry, with emphasis on the axiomatic method and its place in the current secondary mathematics curriculum. Prerequisite: MATH 253.

MATH 481 - Modern Algebra 4 hours. The fundamental structures and techniques of algebra including topics such as groups, rings, fields, quotient structures, theory of equations and polynomials. Prerequisite: MATH 281.

MATH 491 - Advanced Calculus 4 hours. Elements of real function theory including some notions from logic, the topology of the real line, continuity, uniform continuity, differentiation and limits of sequences. Prerequisite: MATH 281.

Mechanical Engineering

MECH 500 - Topics in Mechanical Engineering 2-4 hours.

MECH 514 - Continuum Mechanics 3 hours. Vectors and tensors, analysis of stress and deformation. Velocity fields and compatibility conditions, constitutive equations, mechanical properties of fluids and solids. Derivation of field equations and boundary conditions for fluids and solids.

MECH 516 - Mechanical Vibrations 3 hours. Harmonic oscillator; response of damped linear systems; multi-degree of freedom systems; introduction to vibration of continuous systems.

MECH 517 - Introduction to Finite Element Analysis 3 hours. Use of the finite element method to solve problems in the areas of stress analysis, heat conduction, and fluid flow. Weighted residual and variational approaches, shape functions, numerical integration, and the patch test.

MECH 518 - Advanced Finite Element Analysis 3 hours.

MECH 524 - Advanced Fluid Mechanics 3 hours. Advanced topics in Fluid mechanics: compressible flows, boundary layers, potential flow, and turbomachinery.

MECH 526 - Advanced Heat Transfer 3 hours. An advanced treatment of free and forced convection. The boundary layer equations, laminar and turbulent transfer in channels and over external surfaces. Applications to heat exchange devices and processes.

MECH 527 - Unsteady Fluid Dynamics 3 hours. The course will cover the one dimensional, unsteady flow of gases using the method of characteristics, small wave theory in the frequency domain and numerical methods. The necessary quasi-steady boundary conditions will be discussed. Finally, other applications of the basic theory of isothermal flow and two-dimensional, supersonic flow will be covered.

MECH 532 - Combustion 3 hours. Combustion processes, combustion thermodynamics, and reaction kinetics. Flame ignition and stability limits. Detonation and deflagration waves. Gas phase reactions and solid particle fuel combustion (coal and wastes). Applications to furnaces, incinerators, gasifiers, gas turbines, and engines.

MECH 533 - Engineering Aspects of Rocket Engine Design 3 hours. This is a dual-level course that maybe taken for graduate credit or and an undergraduate elective. It deals with the physic and engineering aspects of rocket engines. In this course, the students will: 1) Learn about the principle of rocket propulsion devices. 2) Gain the ability to understand and analyze high-temperature flow phenomena for thrust generation, including combustion, ignition stability, flow acceleration nozzle design, etc. 3) Learn about experimental testing techniques, including static thrust measurements, measurements of flow properties, safety review procedures, etc. 4) Participate in the design, fabrication, and testing of a small hybrid rocket engine. Unlike solid-fuel or liquid-fuel rockets, the hybrid engine technology uses a solid fuel (such as Plexiglas or plastics) and a gaseous oxidizer (such as oxygen). Because of the solid nature of its fuel and oxidizer systems, hybrid rockets are operationally very safe and reliable.

MECH 535 - Thermal Systems 3 hours. Principles of thermodynamics, fluid mechanics, and heat transfer are applied to the analysis, design, and computer simulation of thermal systems. Types of systems include power plants, heating and air conditioning, heat exchangers, and piping systems.

MECH 536 - Computational Fluid Dynamics 3 hours. This course presents the basics of field computational fluid mechanics and heat transfer. Numerical solutions of many fluid mechanics and heat transfer problems with no closed form solutions will be presented. Attention is given to the idea of the subject, and recent developments, as well as practical computer application in problem assignments.

MECH 537 - Viscous Flows 3 hours. This course covers several aspects of viscous flow mechanics: Navier-Stokes equations; exact solutions of viscous flows; boundary layer theory; properties of laminar and turbulent boundary layers; thermal boundary layers; boundary layer control, Stokes flow; jets and wakes; and numerical methods for solutions of two-dimensional viscous flows.

MECH 542 - Advanced Mechanics of Solids 3 hours. Analysis of stress and strain, failure criteria, energy methods, curved beams, beams on elastic foundations, plates, thick-walled cylinders, stress concentration, and fatigue.

MECH 548 - Introduction to Composite Materials 3 hours. An introduction to composite materials with an emphasis on their selection, analysis, and use in modern engineering applications. Advantages and limitations of composite materials, basic concepts and characteristics. Stiffness and strength theories for uniaxial and multidirectional composite materials, with a macro mechanical emphasis.

MECH 550 - Independent Study 1-4 hours.

MECH 552 - Introduction to Fatigue and Fracture Mechanics 3 hours. An introduction to linear elastic fracture mechanics, calculation of stress intensity factors. Concepts of fracture, fracture toughness, fracture resistance, fatigue crack nucleation, crack growth, high and low cycle fatigue, temperature effects, predictive equations.

MECH 553 - Advanced Materials Behavior and Underlying Mechanisms 3 hours. This course is to develop tools for students to analyze deformation and failure of engineering materials from multiscale points of view. By developing knowledge of micromechanics, meso-mechanics and macro-mechanics students will have a foundation to develop more understanding and useful skill for analysis of elasticity, inelasticity, fracture and fatigue of engineering materials. This class is a step towards updating our curriculum to match the current trends of developing multiscale analysis for deformation and failure of engineering materials and for materials design and improving materials behavior.

MECH 564 - Advanced Mechanical Design 3 hours. Design of mechanical engineering systems with topics including interaction of materials, processing and design; analysis, prediction and prevention of principle modes of mechanical failures. Emphasis placed on analytical, experimental and judgmental techniques to develop the ability to work on unstructured systems.

MECH 566 - Manufacturing 3 hours.

MECH 660 - Research Seminar 1 hours.

MECH 680 - Graduate Thesis 2-15 hours.

MECH 685 - Graduate Internship 1-4 hours.

MECH 690 - Graduate Seminar 0 hours. In this seminar series, each graduate student would present a talk each semester. The subject areas would be related to their thesis, project, ideas, and others related to Mechanical Engineering.

MECH 699 - Master's Project 3 hours.

School Psychology

PSYC 600 - Special Topics in School Psychology 1-3 hours.

PSYC 601 - Foundations of Cultural Diversity 1 hours. As frontline practitioners in schools, school psychologists are faced with a proliferation of cultural issues on a daily basis. It is essential that school psychologists develop an appreciation for cultural diversity and an understanding of how cultural factors interact with the practice of psychology.

This course is intended as an introduction to cultural diversity issues and their impact on the major areas of practice within the school and community settings. Upon completion of this course, students should have acquired knowledge regarding cultural issues that will provide a foundation for exploring these issues in school psychology specialization courses.

PSYC 602 - Seminar in Cultural Diversity 2 hours. This course is an advanced seminar on cultural diversity issues and their impact on the major areas of psychology practice and research. Students will explore these issues in depth and pursue literature research on diversity issues related to their area of specialization.

PSYC 603 - Foundations of School Psychology 3 hours. The theoretical, scientific and practical underpinnings of professional school psychology are covered, with material drawn from both psychology and education. Topics include cognitive, social, emotional, and cultural bases of behavior; educational theory and instructional psychology, particularly related to basic school subjects (reading, mathematics, and written language); and school psychology as a professional specialty, including history and systems, role and function, models of practice, and current issues with particular attention to practice in a rural setting.

PSYC 604 - Human Development: The Life Span 3 hours. This course acquaints the student with the interplay of psychodynamics, behavioral, sociocultural, cognitive and interpersonal theories of development as they combine to explain personality and cognitive functioning across the life span. The student will learn to relate development theory and research to professional practice in educational and clinical settings.

PSYC 605 - Special Topics in the Behavioral Sciences 1-3 hours.

PSYC 606 - Advanced Developmental Psychology 3 hours. An in-depth study of the basic scientific area of human developmental psychology. Considers development across the life span through classical theory and more recent formulations with a focus on empirical research findings. Included are biological, cognitive, social, emotional and cultural factors which influence normal development.

PSYC 607 - Learning and Cognition 3 hours. A study of the basic processes underlying learning, memory and higher cognitive functions such as conceptualization, problem solving and language. Emphasis on the relevance of recent research and theoretical developments in cognitive psychology to school learning. Topics include attention, memory, information processing, problem solving, reasoning, creativity, and experimental paradigms for the study of cognition and learning.

PSYC 608 - Social Psychology and Behavior 3 hours. This course provides a comprehensive background of the predominant models of human personality as formulated by such theorists as Adler, Freud, Jung, Kelly, and Skinner, as well as focus on current research in personality. Such topics as individual differences in traits, cognitive styles, and forms of emotional relatedness are explored and the current controversies regarding the consistency of personality and the question of genetics versus environmental factors in the evolution of human behavior are examined. The interface between pure personality theory/research and its application to social realities and clinical settings is emphasized.

PSYC 609 - Physical Bases of Behavior 3 hours. An overview of basic neuroanatomy and neurophysiology is presented to provide a foundation for understanding the biological bases of human cognitive functioning. Neurologically based problems encountered in the schools are discussed.

PSYC 610 - Special Topics in Cultural Diversity 1-3 hours.

PSYC 611 - History and Systems of Psychology 3 hours. This course presents a comprehensive orientation to the science and practice of psychology. Progressing from ancient foundations to the current state of the discipline, the course is designed to illustrate both the continuity and incremental development of psychology as a science and profession. The course content is organized around three major themes: (1) the historical development of the discipline of psychology as a science and profession; (2) the systems, or “schools of thought” that form the foundation of psychology both historically and currently; and (3) the interweaving influence, as well as tensions, between the science and practice of psychology. The goal is for students to further develop their identities as psychologists through an understanding and appreciation of the broad landscape upon which their discipline is constructed.

PSYC 615 - Special Topics in Cultural Diversity II 1-3 hours.

PSYC 616 - Human Development: Exceptionality 3 hours. This course covers the range of physical, cognitive, communication, and social/emotional exceptionalities in human development from childhood to early adulthood. One focus will be on the commonalities, not just the differences, between children and youth with disabilities and their non-disabled peers. A second focus is on understanding the different contexts of disability. (Cross-listed as SPED 616)

PSYC 617 - Managing the Classroom 3 hours. The course provides both theoretical background and application techniques for developing sensitive and effective classroom management. Behavior management and other methods used to create positive teaching-learning settings for students with special education needs are emphasized. The course focuses on the application of techniques in school environments. (Cross-listed as SPED 617)

PSYC 618 - Affective Development in the Classroom 3 hours. This course examines current research, theory, and application of effective development in children and youth and affective education in the classroom and focuses on strategies for creating healthy teaching-learning environments in all schools for all students.

PSYC 619 - Psychoeducational Interventions 3 hours. This course focuses on interventions that are appropriate for use with a wide range of psychoeducational problems that children present in the schools. Remedial strategies for reading, spelling, math, written expression and language difficulties are reviewed. Case studies are utilized as a method of exploring the interventions. Desired behaviors are specified, interventions planned and their effectiveness evaluated systematically.

PSYC 620 - Special Topics in Schooling I 1-3 hours.

PSYC 625 - Special Topics in Schooling II 1-3 hours.

PSYC 626 - Psychological and Educational Measurements 2 hours. Basic theory of psychological and educational measurements and the elementary statistics of test score analysis including reliability, validity, item analysis, and scales of measurement. Evaluation and selection of standardized tests is emphasized as well as the theory bases of measurement of individual differences. Observational procedures will also be discussed and implemented.

PSYC 627 - Norm-Referenced Testing I 2 hours. This course focuses on the administration, scoring and interpretation of individually administered norm-referenced instruments. Attention is focused on those instruments related to the assessment of cognitive abilities and learning behaviors of school-aged children. The major purpose is to develop the student's repertoire and mastery with these measures and to increase the students' capacity for evaluation of individual behavior and report writing. Co-requisites: PSYC 626 and 656. Lab fee required.

PSYC 628 - Academic Functioning 2 hours. Examines the reading, mathematical and language arts processes and methods of assessing these. A variety of educational assessment techniques are reviewed including norm-referenced tests, curriculum-based approaches, and informal probes, and systems of direct observation. The use of these techniques to assist in the identification of educational difficulties is examined. Approaches to interventions for educational difficulties are surveyed highlighting the link between assessment and remediation. Lab fee required.

PSYC 629 - Social-Emotional Assessment 3 hours. This course provides information and training about a variety of instruments and techniques available to assess the psychological status and functioning of persons and systems, with a particular emphasis on children, adolescents, and families. Modern thematic storytelling tests and objective behavior rating scales are highlighted. The course also covers traditional projective approaches, as well as more recently developed techniques involving social skills and family assessment. Important theoretical and measurement issues are discussed as well as ethical concerns. Students are required to practice administration, scoring, and interpretation of many of the techniques discussed. Prerequisite: PSYC 626. Lab fee required.

PSYC 630 - Special Topics in Assessment I 1-3 hours.

PSYC 632 - Norm-Referenced Testing II 2 hours. Norm-Referenced Tests II is a continuation of training in the processes of assessment of children's cognitive, achievement, and language development. A variety of norm-referenced instruments will be reviewed, including broad-based comprehensive measures and diagnostic measures, as well as approaches for children from different cultural and linguistic backgrounds. Important theoretical issues in intelligence and research-based practices regarding academic development and assessment will be discussed. While students will be required to practice the administration and scoring of assessment instruments, the main focus of this course will be to develop higher-level interpretive skills and ability to communicate findings effectively in a written format.

PSYC 635 - Special Topics in Assessment II 1-3 hours.

PSYC 636 - Foundations of Interpersonal Effectiveness 3 hours. This course focuses on the training and practice of personal skills, which are the prerequisites to the functioning as a professional psychologist. Included is the study of theories and research from which those skills are derived.

The course includes lectures, behavioral rehearsal and group activities, and involves critical self-examination and peer review. Students must demonstrate adequate levels of interpersonal skills according to the instructor's evaluation, in order to successfully complete the course. Such success is a prerequisite for admission to the Intervention sequence in the School Psychology Program.

PSYC 637 - Introduction to Group Dynamics 1 hours. The focus is on developing an understanding of the group process and its evolution, including basic group concepts and their applications. Students are involved in the process as they experience and then conceptualize group processes. An integral part of the experience is the student's engagement in self-examination.

PSYC 638 - Psychotherapy and Behavior Change 3 hours. This course covers a broad range of psychological interventions, with particular emphasis on their applications with children and families. Theory and research in counseling and psychotherapy are covered with emphasis on behavior therapy, cognitive behavior therapy, and behavior modification. Prerequisite: PSYC 636.

PSYC 639 - Exceptionality in Learning and Behavior 3 hours. This course presents the varieties of exceptionality in human learning and behavior. Various psychologically and educationally handicapping conditions are discussed. Classification systems, diagnosis, symptomology, prevalence, incidence, course and treatment are covered with an emphasis on empirical research findings. Professional, societal, and cultural issues in exceptionality provide an important focus for discussion.

PSYC 640 - Special Topics in Child and Family Intervention I 1-3 hours.

PSYC 641 - Introduction to Family Therapy 3 hours. This seminar is a multi-purpose course designed to supplement student experiences in the clinic practicum and to provide a practical introduction to family therapy. . Specifically, students will be trained in concepts and techniques of structural-strategic family therapy through videotaped demonstrations and simulations. Students will also have the opportunity to discuss actual clinic cases as a means of applying family therapy concepts. At the completion of the course, participants should have developed foundation skills for using family therapy interventions. Prerequisites: PSYC 636 and 637, or COUN 636 and 637, or permission of the instructor.

PSYC 642 - Clinical Seminar: Advanced Topics in School Psychology 3 hours. This clinical seminar is a multi-purpose course designed to supplement student experiences in the advanced clinic practicum. The primary purpose of the seminar this semester is to provide students with the opportunity to discuss cases with students and supervisors from other practicum sections. These types of discussions are useful for broadening conceptual perspectives and generating a variety of intervention ideas. A second purpose of the course is to provide students with additional training in areas that are related to direct service provision and integration of such techniques into foundation counseling and assessment approaches.

PSYC 643 - Techniques of Family Therapy 3 hours. This course focuses on the development of skills for utilizing strategic and structural family therapy approaches in school settings. Course material will be taught using didactic presentations, experimental activities, and video examples. Prerequisite: PSYC 638 or COUN 638.

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PSYC 644 - Techniques of Play Therapy 3 hours. This course is designed to introduce participants to practical techniques and models of play therapy. Topics covered include play media, designing the therapy room, and such play therapy models as non-directive, relationship, and developmental-contextual therapies, and theraplay. Students are encouraged to engage child clients in play therapy, and receive regular supervision of their cases throughout the latter part of the course. Prerequisites: PSYC 636, PSYC 638.

PSYC 645 - Advanced Topics in Play Therapy 3 hours.

PSYC 646 - Consultation and Prevention 3 hours. This course covers the concepts and practice of consultation in educational and human service settings. Emphases are on mental health and behavioral consultation including child-centered, teacher-centered and system centered techniques. This course has a practicum component. Prerequisite: PSYC 638 or COUN 638.

PSYC 647 - Prevention and Intervention 3 hours. This course provides a concentrated focus on direct and indirect approaches to interacting with students, teachers, curriculum, and families to reduce the incidence and minimize the impact of behavioral and academic problems. Instruction may include organizational psychology, school structure and culture, family systems, cultural diversity, family partnerships, and early intervention programs.

PSYC 648 - Advanced Seminar in Consultation and Intervention 3 hours. This course provides advanced instruction in consultation techniques, intervention skills, and collaborative processes. Topics include, but are not limited to: organizational consultation, instructional consultation, behavioral consultation, and the application of consultation models in school settings. Prerequisite: PSYC 646.

PSYC 649 - Behavioral School Psychology 3 hours. This course presents a behavioral approach to the delivery of psychological services. The primary objective of the course is to provide an understanding of the principles of applied behavior analysis and their application in classrooms and other settings. This course focuses on both the conceptual elements of learning theory and effective behavioral intervention.

PSYC 650 - Independent Study 1-3 hours.

PSYC 651 - Academic Interventions 3 hours. This course introduces students to a broad array of academic interventions. During this course students will learn the sequence of development of basic academic skills and how to target academic interventions for students with specific academic needs. There will be special emphasis on reading, writing, and written language interventions. Students will demonstrate their knowledge of the academic intervention process through applied intervention project.

PSYC 655 - Special Topics in Child and Family Intervention II 1-3 hours.

PSYC 656 - Field Experience in School Psychology I 1 hours. Each student is placed in a school district one day each week to develop observation skills, gain exposure to the school as a system, begin to interact and practice testing skills with school-aged children and to become oriented to working in the schools as a school psychologist. On-site field supervisors, as well as program faculty, provide ongoing supervision for this experience.

A campus-based seminar provides opportunities for in-depth exploration of issues relating to school functioning. Co-requisite: PSYC 628.

PSYC 657 - Field Experience in School Psychology II 2 hours. This practicum provides a continuation of skill development within the school setting. Students increase their placements to 1.5 days per week in a school district where they practice testing skills and gain experience utilizing observational techniques and providing targeted interventions. In addition, students also participate in provision of special education services where they gain experience working directly with children with disabilities in an academic setting. On-site field supervisors, as well as program faculty, provide ongoing supervision for this practicum. The practicum seminar covers topics such as multidisciplinary teams, the parent-school relationship, and the impacts of educational disabilities on school functioning. Co-requisite: PSYC 651.

PSYC 658 - Clinic Practicum I 3 hours. This is a practical course where students apply previous learning and gain experience in assessment and intervention with children and families and school consultation. Team collaboration, peer review and case conferences are essential elements of this course. Students work with actual clients at the Child and Family Services Center under supervision of professional psychologists. Supervision is provided through the use of audiotaping, videotaping and observation through one-way mirrors. Topical seminars are also included throughout the semester. Prerequisites: PSYC 628, 629, and 638.

PSYC 659 - Clinic Practicum II 3 hours. A continuation of Clinic Practicum I where students will be performing the same activities at a higher level of autonomy and independence. Prerequisite: PSYC 658.

PSYC 660 - Special Practicum I 1-3 hours.

PSYC 661 - Advanced Practicum I 1-3 hours. This practicum provides additional supervised experiences in assessment and intervention at a site arranged by the student and his/her advisor.

PSYC 662 - Advanced Practicum II 1-3 hours. A continuation of PSYC 661, usually in the immediately following semester.

PSYC 663 - Advanced Consultation and Intervention Practicum 3 hours. This course provides an advanced practicum experience in consultation techniques, intervention skills, and collaborative processes. Each student will be placed in a school district for a minimum of one day per week to collaboratively develop and implement intervention plans and/or collaborative teams to address academic or behavioral problems. Program faculty as well as on-site supervisors supervise this experience. Prerequisite: PSYC 646.

PSYC 665 - Special Practicum II 1-3 hours.

PSYC 667 - Internship in School Psychology I 3-9 hours. The internship is the culminating experience of the School Psychology Program. It provides intensive, supervised experience in the roles and functions of a school psychologist and also a broad exposure to the educational and community environment of the internship site. Supervision is provided by one or more on-site certified school psychologists and by the University supervisor. Prerequisites: Comprehensive examinations and satisfactory progress in the program.

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PSYC 668 - Internship in School Psychology II 3-9 hours. A continuation of the intensive field-based internship in school psychology, as described in PSYC 667. Prerequisite: PSYC 667.

PSYC 669 - Pre-doctoral Internship 9 hours. The internship is the culminating experience of the doctoral program in school psychology. It provides intensive, supervised experience in the roles and functions of an applied psychologist working in schools and clinical settings. The internship also provides broad exposure to the educational and community environment of the internship site. Supervision is provided by an on-site licensed psychologist, as well as other appropriately certified school psychologists or credentialed mental health professionals, and by the University supervisor. Prerequisites: Comprehensive examinations and satisfactory progress in the program.

PSYC 670 - Pre-doctoral Internship II 9 hours. A continuation of the intensive field-based doctoral internship in school psychology, as described in PSYC 669. Prerequisite: PSYC 669.

PSYC 671 - Statistical Analysis and Research Design I 3 hours. This course emphasizes: (a) the identification and formulation of research problems; (b) the utilization of research design strategies; and (c) an understanding of appropriate statistics such as one and two way analysis of variance, correlation and regression techniques and their applications.

PSYC 672 - Statistical Analysis and Research Design II 3 hours. Using examples relevant to professional psychology, this course covers advanced issues in research design and analysis. Factorial and non-factorial designs, and single-subject designs are discussed. The statistical tests to be covered include ANOVA, including planned comparisons and comparisons, and ANCOVA. The course emphasizes the appropriate selection and interpretation of designs and analysis for testing specific hypothesis or for conducting program evaluations. Prerequisite: PSYC 671.

PSYC 673 - Statistical Analysis and Research Design III 3 hours. Using examples relevant to professional psychology, this course covers advanced issues in correlational research design and multivariate analysis. Multiple regression analysis, factor analysis, along with other multivariate statistics are covered. The course emphasizes the appropriate selection and interpretation of designs and analyses for testing specific hypotheses. Prerequisite: PSYC 672.

PSYC 674 - Research in School Psychology 3 hours. This course is specifically focused on the design and evaluation of studies relevant to school psychology. A broad literature is contained within this focus, including that from educational psychology, special education, counseling psychology, clinical psychology, and school psychology itself. Students are expected to apply knowledge and skills learned from previous coursework in this sequence in order to develop their own research plan. Prerequisite: PSYC 672.

PSYC 675 - Special Topics in Research and Statistics I 1-3 hours.

PSYC 680 - Special Topics in Research and Statistics II 1-3 hours.

PSYC 681 - Program Evaluation 3 hours. This course introduces students to the theories of program evaluation and various program evaluation models. Students review and critique a number of program evaluations. The implications that theory and program evaluation standards have on local, state and federal evaluations are presented. This course is taught in a seminar format.

PSYC 682 - Service Delivery in the Rural Context 3 hours. The practice of applied professional psychology in a rural area has its own unique characteristics in terms of social, cultural and economic factors. In addition, the stresses and strains on the practitioner are identifiably specific considerations. This course covers these issues in an effort to prepare students for specialized in rural environment.

PSYC 683 - Advanced Seminar: Social Cognition 3 hours. This seminar focuses on the development of children's understanding of the thoughts, intentions, and feelings of others and how this relates to their understanding of those processes within themselves.

PSYC 684 - Advanced Seminar: Health Psychology 3 hours. This course concentrates on the contribution of psychology to the understanding and treatment of physical problems. Particular emphasis is placed on the treatment of disorders such as hypertension, eating disorders, and chronic headaches in children and adolescents. Students will become familiar with the clinical research applying behavior techniques to the treatment of a number of specific medical disorders, and will be able to discuss the relative merits of various approaches to these disorders.

PSYC 685 - Special Advanced Seminar I 3 hours.

PSYC 686 - Advanced Seminar: Theories of Intelligence and School Learning 3 hours. This course examines the research regarding theories of intelligence as well as variables that affect school learning. Spearman, Thorndike and the more traditional models are reviewed as well as the psychometric viewpoint and information processing theories. Discussions focus on the relationship to the practice professional psychology and the development of applied research projects.

PSYC 687 - Advanced Seminar: Early Childhood Services 3 hours. This course covers issues and topics specifically related to the expanded role of the school psychologist in the assessment and intervention with infants and toddlers. In a combination didactic and seminar format, students are exposed to current theory and research regarding the delivery of services to these children and their families, and are required to think critically about the various topics and issues emerging from this new focus. A practicum experience in an early childhood setting provides opportunities to practice assessment and intervention skills and a context for application of current research.

PSYC 690 - Special Advanced Seminar II 3 hours.

PSYC 691 - Organizational Change and School Reform 3 hours. This is an advanced seminar for school professionals interested in organizational change and reform in school settings. Organizational consultation will be considered as a framework for delivering school-based services designed to prevent various learning and adjustment problems often seen as societal issues, such as drug abuse, violence, risky behaviors, and dropping out of school. The course is based on a constructionist perspective where students are actively involved in developing school-based projects involving principals of organizational change to improve instruction, student supports, or service delivery.

PSYC 692 - Supervision and Administration of Psychological Services 3 hours. This course prepares psychologists to function in supervisory and administrative capacities in delivering human services in schools and other child and family-oriented settings. Students become familiar with important issues in these areas and understand organizations from systems perspective. The essential elements and models of effective supervision are also examined.

PSYC 695 - Professional Practice Seminar 3 hours. This course examines the professional, legal and ethical practice of school psychology through lecture, discussion and readings. Focuses on the school psychologist as a systems level facilitator/change agent. Topics include special education regulations, the organization and structure of schools, effective facilitation within the system, ethical guidelines, identification and reporting of child abuse, and related issues. Prerequisite: PSYC 603.

PSYC 696 - Integrative Seminar in Professional Psychology 3 hours.

PSYC 699 - Dissertation 1-12 hours.

Sociology

Graduate students may take these 400-level courses for graduate credit:

SOCI 420 - Social Theory: A Survey 4 hours. An examination of contemporary theoretical schools, e.g. symbolic interactionism, structural functionalism. exchange and conflict, and ethnomethodology. Special attention devoted to the precursors and contemporary representatives of the respective schools. Prerequisite: SOCI 110 or ANTH 110 or permission of instructor. (Cross-listed as CRIT 420)

SOCI 431 - Research Design and Strategies 4 hours. The major research designs and techniques used in collecting social science data. The class selects, designs, and executes a research project and prepares a joint presentation and defense of its findings. Prerequisites: SOCI 110 or ANTH 110, and senior standing or permission of instructor.

Graduate Courses

SOCI 500 - Advanced Topics in Social Science 2 hours. An open course, varying in content from year to year, which allows for concentration on such specialized areas as Political Sociology, Demography, Criminology, Social Change, Stratification, and the like. Prerequisite: Graduate standing or permission of the instructor.

SOCI 550 - Independent Study 1-4 hours.

Summary of Registered Academic Programs

The following programs of study are registered with the New York State Education Department and are currently offered by the Alfred University Graduate School. Their Higher Education General Information System (HEGIS) codes are listed to allow cross-reference between Alfred University and other New York institutions.

Note: Enrollment in other than registered or otherwise approved programs may jeopardize a student's eligibility for certain student aid awards.

Program Title	HEGIS Code	Degree/Award
Art "K-12" Teacher	0831	MSEd or MFA
Biomedical Materials Engineering Science	0905	MS
Business Administration	0506	MBA
Ceramic Art	1009	MFA
Ceramic Engineering	0916	MS
Ceramics	0916	PhD
Community Services Administration	2010	MPS
Counseling	0826.01	MSEd
Counseling	0826.01	CAS
Electrical Engineering	0909	MS
Electronic Integrated Arts	1009	MFA
Glass Science	0915	MS
Glass Science	0916	PhD
Literacy Teacher "Birth-Grade 6"	0830	MSEd
Materials Science and Engineering	0915	MS
Materials Science and Engineering	0915	PhD
Mechanical Engineering	0910	MS
School Psychology	0826.02	MA
School Psychology	0826.02	CAS
School Psychology	2099	PsyD
Sculpture/Dimensional Studies	1002	MFA

The Graduate Council

DR. WILLIAM M. HALL
Chair, Graduate Council;
Associate Provost for Graduate and Professional Programs;
Acting Dean, College of Business

DR. ROBERT K. BITTING
Director, Counseling Program

DR. JOHN D. CERIO
Director, Child and Family Services Center

DR. ALASTAIR N. CORMACK
Dean, Kazuo Inamori School of Engineering

DR. JAMES F. CURL
Chair, Division of Education

DR. DOREEN EDWARDS
Director of Graduate Programs, Kazuo Inamori School of Engineering

DR. NANCY J. EVANGELISTA
Chair, Division of School Psychology

DR. D. WAYNE HIGBY
Professor of Ceramics

MS. LORI A. HOLLENBECK
Director, M.B.A. Program

MS. CARLA C. JOHNSON
Dean of Libraries,

PROF. JOSEPH S. LEWIS, III
Dean, School of Art and Design

DR. LOUIS J. LICHTMAN
Acting Dean, College of Liberal Arts and Sciences

MS. VALERIE J. STEPHENS
Coordinator of Graduate Admissions

Faculty

These members of the Alfred University Faculty are engaged in graduate instruction or research direction:

DANIEL D. ACTON
Professor of Accountancy, D.B.A. (Kent State University); M.B.A (Miami University); B.A. (Muskingum College).

ADEL AL-SHARKAS

Assistant Professor of Finance, Ph.D. (University of New Orleans), M.A., B.S. (Yarmouk University-Jordan).

VASANTHA R.W. AMARAKOON

Professor of Ceramic and Electrical Engineering, Director, Center for Advanced Ceramic Technology, Interim Director, Sponsored Programs, Ph.D. (University of Illinois); M.S. (University of Illinois); B.Sc. (University of Leeds, U.K.); B.Sc. (University of Ceylon, Sri Lanka).

MARTHA G. ANDERSON

Professor of Art History, Ph.D. (Indiana University); M.A. (New York University); B.A. (St. Olaf College).

BRIAN ARNOLD

Assistant Professor of Photography, M.A. (Massachusetts College of Art); B.A. (The Colorado College).

JANA ATLAS

Assistant Professor of School Psychology, Ph.D. (Wayne State University); M.S.W. (State University of New York, Albany); B.A. (State University of New York, Binghamton).

JALAL BAGHDADCHI

Associate Professor of Electrical Engineering, M.S., Ph.D. (North Carolina A&T University); B.S. (University of Massachusetts).

ROBERT K. BITTING

Associate Professor of Counseling, Director, Counseling Program, Ph.D. (University of Buffalo), M.S.Ed. Alfred University, B.A. Thiel College, Licensed Mental Health Counselor (LMHC).

PEER BODE

Professor of Video Arts, M.A.H. (State University of New York, Buffalo); B.A. (State University of New York, Binghamton).

JEAN A. CARDINALE

Associate Professor Biology, Ph.D.(University of Rochester); M.S. (University of Rochester); B.S. (University of Rochester).

WILLIAM M. CARTY

Professor of Ceramic Engineering, Ph.D. (Washington, Seattle); B.S., M.S. (University of Missouri, Rolla).

JOHN D. CERIO

Professor of School Psychology, Director, Child and Family Services Center, Ph.D. (Boston College); M.Ed. (St. Lawrence University); A.B. (Syracuse University).

XIAOWEN CHEN

Assistant Professor of Printmaking, M.F.A./M.A. (Illinois State University); B.F.A. (Lu Xun Academy of Fine Arts).

JEONGHEE CHOI

Assistant Professor of Education, Ph. D. (University of Iowa), M. A. (University of Iowa), B.A. (Ewha Woman University, Seoul, Korea).

ALEXIS G. CLARE

Professor of Glass Science, Director, NSF Industry-University Center for Biosurfaces, B.Sc., Ph.D., (Reading, England).

ALASTAIR N. CORMACK

VanDerck Frechette Professor of Ceramic Science, Dean, Kazuo Inamori School of Engineering, M.Sc., Ph.D. (University College of Wales); B.A., M.A. (University of Cambridge).

DIANE COX

Associate Professor of Sculpture, Chair, Three Dimensional Studies, M.F.A.-Sculpture (School of the Art Institute of Chicago); B.A. (University of Colorado).

JAMES F. CURL

Professor of Education, Chair, Division of Education. M.Ed., Ph.D. (University of Pittsburgh); M.A. (Northwestern University); B.A. (Davidson College).

ANNE CURRIER

Professor of Ceramic Art, M.F.A. (University of Washington); B.F.A. (School of the Art Institute of Chicago).

ZONG DAI

Assistant Professor of Management Information Systems, D.B.A. (University of Manchester); M.B.A. (University of Saskatchewan) Graduate Diploma (Anhui University-China).

ANDREW DEUTSCH

Assistant Professor of Video Arts, M.F.A., (Rensselaer Polytechnic Institute); B.F.A. (Alfred University).

DAVID A. EARL

Associate Professor of Ceramic Engineering, Director, Center for Environmental and Energy Research, Ph.D. (University of Florida); B.S. (Alfred University).

GERAR EDIZEL

Assistant Professor of Art History, Chair, Art History Division, M.A. (Cornell University); B.F.A. (State Academy of Applied Fine Arts).

DOREEN D. EDWARDS

Associate Professor of Materials Science and Engineering, Graduate Program Director, Kazuo Inamori School of Engineering, Ph.D. (Northwestern University); B.S. (South Dakota School of Mines and Technology).

STEPHEN D. EDWARDS

Professor of Glass, M.F.A. (Illinois State University); B.A. (San Jose State).

NANCY J. EVANGELISTA

Associate Professor of Psychology, Chair, School Psychology Division, M.S., Ph.D., (Syracuse University); B.A. (Western Michigan University).

JINGHONG FAN

Associate Professor of Mechanical Engineering, M.S., Ph.D. (University of Cincinnati); B.S. (Shanghai Jiao Tong University).

LISA M. FLICK

Assistant Professor of Biology and Biomaterials; M.S., Ph.D. (University of Rochester); B.S. (Nazareth College of Rochester).

ROGER FREEMAN

Professor of Photography, M.S. (Institute of Design, Chicago); B.A. (University of Wisconsin, Madison).

ADDISON E. FREY

Associate Professor of Mathematics, Chair, Division of Mathematics and Computer Science, M.S., Ph.D. (U. of Pittsburgh); B.S. (Ohio University).

MARK FUGATE

Associate Professor of School Psychology, Ph.D. (Lehigh University); M.A. (Indiana University of Pennsylvania); B.A. (Oral Roberts University).

EDWARD GAUGHAN

Professor of School Psychology, Ed.M., Ph.D. (Temple University); B.A. (King's College).

ERIC C. GAZE

Assistant Professor of Mathematics and Education, Ph.D. (University of Massachusetts); M.S. (University of Massachusetts); B.A. (The College of the Holy Cross).

HERBERT GIESCHE

Associate Professor of Ceramic Engineering, Ph.D. and M.S. (University of Mainz, Germany).

ANDREA GILL

Associate Professor of Ceramic Art, M.F.A. (Alfred University); B.F.A. (Rhode Island School of Design).

JOHN GILL

Professor of Ceramic Art, M.F.A. (Alfred University); B.F.A. (Kansas City Art Institute).

MATTHEW M. HALL

Assistant Professor of Biomaterials and Glass Science, Ph.D. Glass Science (Alfred University); M.S. Glass Science (Alfred University); B.S. Ceramic Engineering (University of Missouri-Rolla)

Graduate School Faculty

WILLIAM M. HALL

Acting Dean, College of Business, Professor of Sociology, M.A., Ph.D. (Syracuse University); B.A. (State University of New York, Geneseo).

ROBERT A. HEINEMAN

Professor of Political Science, M.A., Ph.D. (American University); B.A. (Bradley University).

D. WAYNE HIGBY

Professor of Ceramic Art, M.F.A. (University of Michigan); B.F.A. (University of Colorado).

BRETT HUNTER

Assistant Professor of Art, Sculpture/Dimensional Studies, M.F.A. (Bowling Green State University), B.A. (Kalamazoo College)

ROBERT G. HUTTER

Professor of Law, Juris Doctor (University of Maryland); M.B.A. (St. Bonaventure University); B.S. Ch.E. (Virginia Polytechnic Institute).

MARY ILLUMINATO

Assistant Professor of Foundations, M.F.A (University of Wisconsin, Madison), B.F.A. (Carnegie Mellon University, Pittsburg).

LINDA E. JONES

Professor of Ceramic Engineering, M.S., Ph.D. (Pennsylvania State University); B.S. (Mary Washington College, Virginia).

WILLIAM C. LACOURSE

Professor of Glass Science, Ph.D. (Rensselaer Polytechnic Institute); B.S., M.S. (State University of New York, Stony Brook).

BARBARA LATTANZI

Assistant Professor of Expanded Media, M.A.H. (State University of New York, Buffalo); B.F.A. (School of Art Institute, Chicago).

CRIS LAUBACK

Assistant Professor of School Psychology, M.A., Psy.D. (Alfred University); A.B. (Colgate University).

SANGJOON LEE

Assistant Professor of Economics, Ph.D (State University of New York at Buffalo); M.B.A (George Washington University)

WALLACE B. LEIGH

Professor of Electrical Engineering, Ph.D. (Northwestern University); B.S. (University of Utah).

LISE LEMELAND

Assistant Professor of Painting, M.F.A. (Hunter College); B.F.A. (San Francisco Art Institute).

JOSEPH S. LEWIS, III

Dean, School of Art and Design, M.F.A. (Maryland Institute); BA (Hamilton College)

ROGER J. LOUCKS

Assistant Professor of Physics, Ph. D. (University of Illinois at Urbana).

MARY LUM

Professor of Painting, M.F.A. (Rochester Institute of Technology); B.F.A. (University of Michigan).

STEVEN MAYES

Assistant Professor of Mechanical Engineering, Ph.D. (University of Wyoming); M.S. (George Washington University); B.S.M.E., B.S.B.A. (Old Dominion University).

WALTER McCONNELL

Associate Professor of Ceramic Art, M.F.A. (Alfred University); B.F.A. (University of Connecticut).

MARY DRACH McINNES

Assistant Professor of Art History, Ph.D., M.A. (Boston University); B.A. (University of California, Berkeley).

ALAN MEIER

Assistant Professor of Metallurgy and Materials Engineering, M.S., Ph.D. (Colorado School of Mines); B.S. (University of Colorado).

SCOTT T. MISTURE

Associate Professor of Materials Science and Engineering; B.S., Ph.D. (Alfred University).

THEODORE MORGAN

Associate Professor of Freshman Foundation, M.F.A. (Ohio University); B.F.A. (Western Michigan University, Kalamazoo).

LYNN M. O'CONNELL

Assistant Professor of School Psychology, Psy.D. (Alfred University).

CARLSON PIAN

Professor of Mechanical Engineering, B.S., M.S., Ph.D. (University of Michigan).

STEVEN M. PILGRIM

Professor of Materials Science and Engineering, B.S., Ph.D. (The Pennsylvania State University)

ANGUS POWERS

Assistant Professor of Glass Art, M.F.A. (Temple University); B.F.A. (Alfred University)

JOSEPH W. ROSICZKOWSKI

Associate Professor of Mechanical Engineering, B.S., M.E., Ph.D. (Clarkson University).

Graduate School Faculty

JUDY ROSS

Assistant Professor of Design, M.F.A. (University of Michigan School of Art and Design).

DONALD ROYCE-ROLL

Professor of Art History, Ph.D. (Cornell University); M.A. (Michigan State University); M.A. (Downing College, Cambridge); BS (University of Nebraska)

JOSEPH SCHEER

Associate Professor of Printmaking, Chair, Expanded Media Division, M.F.A., M.A. (University of New Mexico); B.F.A. (Alfred University).

WALTER A. SCHULZE

Professor of Ceramic and Electrical Engineering, B.S., M.S., Ph.D. (The Pennsylvania State University).

THOMAS P. SEWARD, III

Professor of Glass Science and Director, NSF Industry-University Center for Glass Research, M.S., Ph.D. (Harvard); B.A. (Wesleyan University).

EZRA SHALES

Assistant Professor of Art History, Ph.D. (Bard Graduate Center); M.F.A. (Hunter College); BA (Wesleyan University)

JAMES E. SHELBY, JR.

Professor of Ceramic Engineering, B.S., M.S., Ph.D., (University of Missouri, Rolla).

LINDA SIKORA

Assistant Professor of Ceramic Art, M.F.A. (University of Michigan); B.F.A. (Nova Scotia College of Art and Design).

JUDITH STRAHOTA

Assistant Professor of Sculpture, M.F.A. (School of the Art Institute of Chicago); B.F.A. (University of Colorado at Boulder)

JIANXIN TANG

Professor of Electrical Engineering, Ph.D. (University of Connecticut); M.S. (University of Bridgeport); B.S. (Guangxi University).

RICHARD THOMPSON

Professor of Painting, B.F.A., M.A., (University of New Mexico).

ANGIE TO

Assistant Professor of Art, M.F.A. (Ohio State University); D.F.A. (Alberta College of Art and Design-Canada).

FRED J. TSCHIDA

Professor of Glass Art, M.F.A. (University of Minnesota); B.F.A. (St. Cloud State University); A.A. (University of Minnesota).

JAMES R. VARNER

Professor of Ceramic Engineering, B.S., M.S., Ph.D. (Alfred University)

ARUN K. VARSHNEYA

Professor of Glass Science and Engineering, M.S., Ph.D. (Case Western Reserve University); B.Sc. (University of Sheffield, U.K.).

FRANCES A. VIGGIANI

Associate Professor of Management, Ph.D., M.A. (Cornell University); B.A. (University of Massachusetts).

XINGWU WANG

Professor of Electrical Engineering, Ph.D. (State University of New York, Buffalo); M.S. (Hangzhou University, China); B.S. (Harbin Naval Engineering Institute, China).

M. KEVIN WIXTED

Assistant Professor of Painting, M.A., B.A. (Bloomsburg University).

GLENN E. ZWEYGARDT

Professor of Sculpture, M.F.A. (Maryland Institute College of Art); B.F.A. (Wichita State University).

2006-2007

Fall Semester

	Day	Date
International Student Orientation	Sunday-Tuesday	Aug 20-22
Residence Halls open 8:00 a.m. for New Students	Wednesday	Aug 23
Orientation for New Students	Wednesday-Sat	Aug 23-26
Residence Halls Open for Returning Students	Saturday	Aug 26
Classes Begin	Monday	Aug 28
Last Day to Add courses, Last Day to Drop or select Pass/Fail in "A" Block courses	Friday	Sep 1
Last Day to Drop, or select Pass/Fail in a full-semester course	Friday	Sep 8
Family Weekend	Friday-Sunday	Sep 15-17
Last Day to Withdraw, cancel Pass/Fail in "A" Block	Friday	Sep 22
<i>*Rosh Hashanah begins at sundown</i>	Friday	Sep 22
<i>*Ramadan begins</i>	Saturday	Sep 23
Homecoming Weekend	Friday-Sunday	Sep 29-Oct 1
<i>*Yom Kippur begins at sundown</i>	Sunday	Oct 1
Last Day of "A" Block	Friday	Oct 13
Mid-Term Break - no classes (Mid-Term grades due by 12:00 noon Monday)	Monday-Tuesday	Oct 16-17
Last Day to Add/Drop or Select Pass/Fail option in "B" Block courses	Friday	Oct 20
Last Day to Withdraw or cancel Pass/Fail in a full-semester course	Tuesday	Oct 24
Advisement Week for Spring 2007 Registration	Monday-Friday	Oct 30-Nov 3
Web Registration for Spring Semester Begins (in class year order with graduate students and seniors first)	Mon-Thu (11 days)	Nov 6-16
Last Day to Withdraw, cancel Pass/Fail in "B" Block	Tuesday	Nov 14
Thanksgiving recess begins after last class	Tuesday	Nov 21
Classes Resume	Monday	Nov 27
Classes End (after last class meeting)	Friday	Dec 8
Final Exams begin (grades due within 48 hours)	Monday	Dec 11
Fall Semester ends after last Final Exam	Friday	Dec 15
Final Grades due by 10:00 a.m.	Monday	Dec 18

Spring Semester

Residence Halls open 10:00 a.m.	Sunday	Jan 14
Classes Begin	Tuesday	Jan 16
Last Day to Add courses, Last Day to Drop or select Pass/Fail in "A" Block courses	Monday	Jan 22
Last Day to Drop or select Pass/Fail in a full-semester course	Monday	Jan 29
Last Day to Withdraw, cancel Pass/Fail in "A" Block	Monday	Feb 12
<i>*Ash Wednesday</i>	Wednesday	Feb 21
Last Day of "A" Block, Spring Break begins after last class	Friday	Mar 2
Mid-Term Grades due by 12:00 noon	Monday	Mar 5
Classes Resume	Monday	Mar 12

Last Day Add/Drop or Select Pass/Fail option in "B" Block courses	Wednesday	Mar 14
Last Day to Withdraw or cancel Pass/Fail in a full-semester course	Monday	Mar 19
Advisement Week for Fall 2007 Registration	Monday-Friday	Mar 26-30
Web Registration for Fall Semester Begins	Mon-Thu (11 days)	Apr 2-12
<i>*Passover begins at sundown</i>	Monday	Apr 2
<i>*Good Friday</i>	Friday	Apr 6
Last Day to Withdraw or cancel Pass/Fail in "B" Block	Monday	Apr 9
Last Day to Defend a Graduate Thesis/Project	Friday	Apr 20
Honors Convocation	Friday	Apr 20
Spring Family Weekend/Hot Dog Day Weekend	Friday-Sunday	Apr 20-22
Classes End (after last class meeting)	Monday	Apr 30
Final Exams begin (grades due within 48 hours)	Wednesday	May 2
Spring Semester ends after last Final Exam	Monday	May 7
Commencement	Saturday	May 12

**Religious observances occurring during semesters. Scheduled classes are in session.*

Summer Sessions

First Session	Monday-Friday	May 14-Jun22
Second Session	Monday-Friday	Jun 25-Aug 3

2007-2008

Fall Semester

Orientation for New International Students	Sunday-Tuesday	Aug 19-21
New Student Check-in/Move-in Day	Wednesday	Aug 22
Orientation for New Students	Wed-Sat	Aug 22-25
Residence Halls Open for Returning Students	Saturday	Aug 25
Classes Begin	Monday	Aug 27
Last Day to Add courses, Last Day to Drop or select Pass/Fail in "A" Block courses	Friday	Aug 31
Last Day to Drop or select Pass/Fail in a full-semester course	Friday	Sep 7
<i>*Rosh Hashanah begins at sundown</i>	Wednesday	Sep 12
<i>*Ramadan begins</i>	Thursday	Sep 13
Family Weekend	Friday-Sunday	Sep 14-16
Last Day to Withdraw, cancel Pass/Fail in "A" Block	Friday	Sep 21
<i>*Yom Kippur begins at sundown</i>	Friday	Sep 21
Last Day to apply for Study Abroad-Spring Semester	Monday	Oct 1
Homecoming Weekend	Friday-Sunday	Oct 5-7
Last Day of "A" Block	Friday	Oct 12
Mid-Term Break - no classes (Mid-Term grades due by 12:00 noon Monday)	Monday-Tuesday	Oct 15-16
Last Day to Add/Drop or Select Pass/Fail option in "B" Block courses	Friday	Oct 19
Last Day to Withdraw, cancel Pass/Fail in a full-semester course	Tuesday	Oct 23
Advisement Week for Spring 2008 Registration	Monday-Friday	Oct 29-Nov 2
Web Registration for Spring Semester Begins	Mon-Thu (11 days)	Nov 5-15

126 Academic Calendars

Last Day to Withdraw, cancel Pass/Fail in "B" Block	Tuesday	Nov 13
Thanksgiving recess begins after last class	Tuesday	Nov 20
Classes Resume	Monday	Nov 26
<i>*Hanukkah begins at sundown</i>	<i>Tuesday</i>	<i>Dec 4</i>
Classes End (after last class meeting)	Friday	Dec 7
Final Exams begin (grades due within 48 hours)	Monday	Dec 10
Fall Semester ends after last Final Exam	Friday	Dec 14
Final Grades due by 10:00 a.m.	Monday	Dec 17

Spring Semester

Orientation for New International Students	Sunday-Monday	Jan 20-21
Residence Halls open 10:00 a.m.	Sunday	Jan 20
Classes Begin	Tuesday	Jan 22
Last Day to Add courses, Last Day to Drop or select Pass/Fail in "A" Block courses	Monday	Jan 28
Last Day to Drop, select Pass/Fail in a full-semester course	Monday	Feb 4
<i>*Ash Wednesday</i>	<i>Wednesday</i>	<i>Feb 6</i>
Last Day to Withdraw, cancel Pass/Fail in "A" Block	Monday	Feb 18
Summer School Registration Begins; Last Day to Apply for Study Abroad in Fall Semester	Monday	Mar 3
Last Day of "A" Block, Spring Break begins after last class	Friday	Mar 7
Mid-Term Grades due by 12:00 noon	Monday	Mar 10
Classes Resume	Monday	Mar 17
Last Day to Add/Drop or Select Pass/Fail option in "B" Block courses	Wednesday	Mar 19
<i>*Good Friday</i>	<i>Friday</i>	<i>Mar 21</i>
Last Day to Withdraw, cancel Pass/Fail in a full-semester course	Monday	Mar 24
Advisement Week for Fall 2008 Registration	Monday-Friday	Mar 31-Apr 4
Web Registration for Fall Semester Begins	Mon-Thu (11 days)	Apr 7-17
Last Day to Withdraw, cancel Pass/Fail in "B" Block	Monday	Apr 15
Passover begins at sundown	Saturday	Apr 19
Honors Convocation	Friday	Apr 25
Spring Family Weekend/Hot Dog Day Weekend	Friday-Sunday	Apr 25-27
Last Day to Defend a Graduate Thesis/Project	Friday	May 2
Classes End (after last class meeting)	Monday	May 5
Final Exams begin (grades due within 48 hours)	Wednesday	May 7
Spring Semester ends after last Final Exam	Monday	May 12
Commencement	Saturday	May 17
Summer Sessions		
First Session	Monday-Friday	May 19-Jun 27
Second Session	Monday-Friday	Jun 30-Aug 8

**Religious observances occurring during semesters. Scheduled classes are in session.*

General Information

**607 871 2111
or 607 871 2175**

Academic and Administrative Offices

The Graduate School

607 871 2141

Financial Aid and Scholarships

Director of Financial Aid

607 871 2159

Health Center/NYS Immunization Compliance

Crandall Health Center

607 871 2400

Housing

Office of Residence Life

607 871 2186

Student Service Center

- Registrar/Transcripts and Records
- Student Accounts

607 871 2123

Summer Sessions/Programs

Summer Programs Office

607 871 2612