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Buffalo State College

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State University of New York

COLLEGE at BUFFALO

1977-78

# graduate catalog

GRADUATE OFFICE  
STATE UNIVERSITY  
**COLLEGE AT BUFFALO**  
1300 ELMWOOD AVENUE  
BUFFALO, NEW YORK 14222

NON-PROFIT ORG.  
U.S. POSTAGE PAID  
BUFFALO, N.Y.  
PERMIT NO. 277

EDWARD H. WELLS, Secretary  
STATE UNIVERSITY COLLEGE  
BUFFALO, N. Y.



EDWARD H. BULLOCK  
STATE UNIVERSITY COLLEGE  
BUFFALO, N. Y.

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The College reserves the right to change any provision or requirement of this Catalog at any time within the student's term of residence and without prior notice.

It is the policy and practice of the State University College at Buffalo to provide equal opportunity to all members of the student body, faculty and staff on the basis of individual qualifications and merit. No student shall be denied admission or otherwise discriminated against because of race, sex, religion, age or national origin.

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State University of New York  
**COLLEGE at BUFFALO**

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**1977-78**

# graduate catalog



## Directory for Correspondence

Inquiries will receive prompt attention if addressed to the appropriate administrative office and sent to: State University College at Buffalo, 1300 Elmwood Avenue, Buffalo, New York 14222.

<b>Admission</b>	Dean of Graduate Studies
<b>Assistantships and Fellowships</b>	Chairperson of appropriate department or Dean of Graduate Studies
<b>Degree Requirements</b>	Dean of Graduate Studies or Chairperson of appropriate department
<b>Department Chairperson</b>	(see appropriate section of catalog)
<b>Entrance Examinations</b>	Dean of Graduate Studies
<b>Financial Aid</b>	Director of Financial Aid
<b>Housing</b>	Director of Housing
<b>Registration</b>	Registration Office
<b>Transcripts</b>	Registrar
<b>Veterans' Affairs</b>	Coordinator of Veterans' Affairs

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## Student Progress Sheet

Event	When Completed	Date Completed
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**Make application for admission** to the Graduate Office. (Forms available in the Graduate Office — Cleveland Hall 511)

**Prior:**

May 1 for Fall Admission  
Oct. 1 for Spring Admission  
March 1 for Summer Admission.  
Once admitted, you need make no further application unless you wish to change majors.

The applicant should request Registrars of colleges previously attended to send two official transcripts directly to the Office of Graduate Studies & Research. (One of these will be given to the academic department.) A final, official transcript showing the degree(s) awarded must be received before final graduate status is awarded. If the applicant has attended Buffalo State College, the Graduate Office will obtain a transcript reflecting work taken only at Buffalo State College. (If the student is currently enrolled, he must request the final transcript showing the degree awarded.)

At time application for graduate admission is made to the Graduate Office, the final transcript showing the awarding of a degree must be furnished no later than thirty days after the beginning of the student's first semester of graduate study.

Request Educational Testing Service, Princeton, New Jersey 08540, forward an official report of test scores. Aptitude portion required for all M.S.Ed. programs. Aptitude and appropriate advanced section required for all M.A. programs.

At the time application for Graduate Admission is made to the Graduate Office.

Miller's Analogies Test scores required for Educational Administration and Supervision Program. G.R.E. & Miller's Analogies test registration forms are available in the Graduate Office.

Event	When Completed	Date Completed
-------	----------------	----------------

Receive a graduate admission decision. (Notification sent from the Graduate Office.)

Approximately three weeks after all required credentials are received by the Graduate Office.

Contact Chairperson of appropriate department for the assignment of a graduate advisor. Develop tentative degree program.

Tentative program prior to first term of enrollment. Final program required after six hours but prior to the completion of twelve graduate hours.

Register for classes each term. (Materials forwarded by the Registration Office.)

Pre-register as announced by the Registration Office or at manual registration in accordance with direction provided by the Registration Office.

Apply for Degree Candidacy. (Forms available in the Graduate Office.)

After the completion of six graduate hours but prior to the conclusion of twelve graduate credits.

Request transfer of graduate credits from another university. (see page 27 which details the guidelines concerning transfer credit.)

Transcripts should be forwarded to the Office of Graduate Studies and Research (Cleveland Hall 511) as soon as the credits are completed. Actual transfer of credit is made at the time of approval of degree candidacy.

File Application for Graduation with the Graduate Office. (Forms available from the Graduate Office.)

By the end of the second week of the term in which you expect to complete your degree.

Initiate or update information for Placement Credentials. (Information available from Placement Office.)

During last term of enrollment.

Payment of Diploma fee. (Information supplied by Graduate Office after degree has been approved.)

After notification of degree approval by the Graduate Office.



## ∞ Curricular Organization

FACULTIES	DEPARTMENTS	GRADUATE DEGREES OFFERED
<b>ARTS AND HUMANITIES</b>	Art Education	M.S. Ed.
DR. HARRY AUSPRICH, Dean Room 204 Rockwell Hall	*Design English *Fine Arts *Foreign Language *Journalism/Broadcast & Speech Communication *Performing Arts *Philosophy & Religious Studies	M.A., M.S. Ed.
<b>NATURAL AND SOCIAL SCIENCES</b>	*Anthropology Biology Chemistry *Economics & Political Science *Geography & Sociology Geosciences/General Science/Physics	M.A., M.S. Ed. M.S., M.S. Ed. M.A.—Physics M.S. Ed.—Physics M.S. Ed.—Geosciences M.S. Ed.—General Science
DR. IRENE M. HULICKA, Dean Room 113 New Classroom Building	*Health, Physical Education & Recreation History & Social Studies Education	M.A.—History M.S. Ed.—Social Studies Education
	Mathematics *Psychology	M.A., M.S. Ed.
<b>APPLIED AND PROFESSIONAL STUDIES</b>	Behavioral & Humanistic Studies	M.S. Ed.—Elementary Education; Elementary & Early Secondary (Jointly offered)
DR. RALPH W. WILLIAMS, Dean Room 114 Caudell Hall	Curriculum & Supervision	M.S. Ed.—Student Personnel Services C.A.S.—School Administration & Supervision
	Exceptional Children Education	M.S. Ed.—Communication Disorders M.S. Ed.—Learning & Behavioral Disorders M.S. Ed.—Mental Retardation M.S. Ed.—Physical Handicapped M.S. Ed.—Home Economics Education
	Consumer Studies & Home Economics *Nutrition & Food Science *Community/Social Serv- ices/Criminal Justice *Technology & Business Studies Industrial Arts & Vocational Education	M.S. Ed.—Industrial Arts Education M.S. Ed.—Vocational Technical Education

∞ \*These departments do not offer graduate degrees but may offer graduate elective courses.



## Academic Calendar 1977-78

### JULY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

### AUGUST

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

### SEPTEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

### OCTOBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

### NOVEMBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

### DECEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

### JANUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

### FEBRUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

### MARCH

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

### APRIL

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

### MAY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

## Graduate Calendar 1977-78

### FALL SEMESTER 1977

- September 1 Thurs. Graduate Registration  
6 Tues. Classes begin  
13 Tues. Graduate Cross Registration, Graduate Drop-Add  
22 Thurs. Yom Kippur—no classes  
23 Fri. Final date to file for December 1976 graduate degree with Graduate Office  
27 Tues. Last day to apply for Graduate Independent Study
- October 3 Mon. Final date for submission of Graduate Admission Applications for Spring 1978 (Degree programs)  
10 Mon. Columbus Day—no classes
- November 11 Fri. Last date to withdraw from Fall 1977 classes  
15 Tues. Final date for submission of incomplete grade changes by instructor to Registrar's Office  
22 Tues. Thanksgiving recess begins at close of classes
- December 22 Thurs. Classes end

### SPRING SEMESTER 1978

- January 16 Mon. Graduate Registration  
19 Thurs. Classes begin  
26 Thurs. Graduate Cross Registration, Graduate Drop-Add
- February 3 Fri. Final date to file for May 1977 graduate degree with Graduate Office  
10 Fri. Last day to apply for Graduate Independent Study  
20 Mon. Washington's Birthday—no classes
- March 3 Fri. Final date for submission of Graduate Admission Applications for Summer 1978 (Degree programs)  
23 Thurs. Mid-semester recess begins  
31 Fri. Last day to withdraw from Spring 1978 classes



April	3 Mon.	Classes resume Final date for submission of incomplete grade changes to the Registrar's Office
	20 Thurs.	Spring Weekend (Begins at close of classes)
	24 Tues.	Classes resume
May	5 Fri.	Final date for submission of Graduate Admission Applications for Fall 1978 (Degree programs)
	19 Fri.	Classes end
	21 Sun.	Commencement (Tentative)

### SUMMER SESSION 1978

June 5 - July 15	Mon. - Sat.	First Session
June 26 - Aug. 5	Mon. - Sat.	Middle Session
June 30	Fri.	Last day to apply for August 1977 graduate degree
July 17 - Aug. 26	Mon. - Sat.	Last Session
July 21	Fri.	Last day to submit Graduate Independent Study
Aug. 7 - Aug. 26	Mon. - Sat.	Post Session

## State University of New York

The State University of New York, now in its 28th year of service, is the largest, centrally managed, multi-level system of public higher education in the nation.

Since its founding in 1948, through consolidation of 29 State-supported but unaffiliated campuses, the University has grown in response to need until its services are now felt educationally, physically and culturally the length and breadth of New York State.

The University's 64 geographically dispersed campuses bring educational opportunity within commuting distance of virtually

all New York citizens. In many communities, the SUNY campuses are cultural centers of the area and significant contributors to the local economy.

In 1975-76, nearly 355,000 students are studying in its classrooms or pursuing study at home, at their own pace, through such innovative institutions as Empire State College, a campus without walls. More than 100,000 students are 24 years of age or older, reflecting SUNY's ability to adjust to meet the needs of more mature students.

During its relatively brief existence, it has graduated more than 600,000 alumni, the majority of whom are pursuing their careers in villages, towns and cities across the State.

Chancellor Ernest L. Boyer, in a recent report to the University's Trustees, emphasized the diverse role of SUNY when he said, "The State University welcomes not only the future architects, business executives, engineers, surgeons and literary critics, but also future dairy farmers and medical technicians, accountants and social workers, foresters and automobile mechanics. And through work in film, electronics, pollution control, data processing, police science, urban studies and similar fields, the University seeks to educate persons for tomorrow's roles as well as those of today."

To provide such opportunity on a continuing basis, the University is uniquely organized into a system comprised of: four University centers (two of which, Buffalo and Stony Brook, include health science centers); two medical centers; 13 colleges of arts and science, a non-residential college; three specialized colleges, six agricultural and technical colleges; five statutory colleges administered in cooperation with Cornell and Alfred Universities, and 30 locally-sponsored community colleges.

In addition to baccalaureate studies, 12 of the senior campuses offer graduate study at the doctoral level, and 22 at the master's level.

The two-year colleges offer associate degree opportunities in arts and science in a wide range of technical areas. They also provide transfer programs within the University for students wishing to continue to the baccalaureate degree.

Ten Educational Opportunity Centers serve the educationally deprived by upgrading occupational skills for more gainful employment and identifying students with college potential to prepare them for enrollment in the state's public and private colleges.

Overall, at its EOCs, two-year colleges, four-year campuses and university and medical centers, the University offers 3,500 academic programs.



State University is governed by a Board of Trustees, appointed by the Governor, which determines the policies to be followed by the 34 State-supported campuses.

The 30 community colleges operating under the program of State University have their own local board of trustees. The State contributes one-third to 40 percent of their operating costs and one-half of their capital costs.

The State University motto is "Let Each Become All He Is Capable of Being."

### Board of Trustees

Mrs. Maurice T. Moore, B.A., LL.D., L.H.D., *Chairman*  
New York City

James J. Warren, L.H.D., *Vice Chairman* ..... Albany

Donald M. Blinken, B.A. .... New York City

Robert R. Douglass, A.B., LL.B. .... New York City

Manly Fleischmann, A.B., LL.B. .... Buffalo

William D. Hassett, Jr., B.A., L.H.D. .... Snyder

John L. S. Holloman, Jr., B.S., M.D. .... East Elmhurst

Frank L. Jackalone ..... Albany

Mrs. Nan Johnson, B.A., M.A. .... Rochester

Mrs. Judith Davidson Moyers, B.S. .... Garden City

John A. Roosevelt, A.B. .... New York City

Mrs. Edward Siegel, R.N. .... Roslyn

Roger J. Sinnott, B.S. .... Utica

Mrs. Walter N. Thayer ..... New York City

Thomas VanArsdale, B.E.E. .... New York City

Darwin R. Wales, B.A., LL.B. .... Binghamton

### Chancellor of the University (Acting)

James F. Kelly, J.D., P.S.D., D.Sc.

Secretary of the University Martha J. Downey, B.S., M.A.

## State University College at Buffalo

The State University College at Buffalo is the largest College in the State University of New York system. The College's enrollment of over 10,000 undergraduate and 2,200 graduate students comprises students from all 62 counties in New York state, 15 additional states and 40 foreign countries. This national as well as international representation in the student body offers excellent opportunities to develop a broader understanding of the educational and professional processes related to individual achievement and cultural concerns of society.

Metropolitan Buffalo, with a population of more than 1.3 million, provides many opportunities to satisfy student interests. Over 1,700 manufacturing firms, 125 research companies, many regional, state and federal offices as well as the internationally known Albright-Knox Art Gallery, the Studio Arena Theater and the Buffalo and Erie County Historical Society combine to offer cooperative employment and study opportunities for graduate students.

The College offers a wide range of academic programs through its three faculties: Applied and Professional Studies, Arts and Humanities, and Natural and Social Sciences. Teaching, research, scholarly publication and professional activities of the faculty have gained national and international recognition for the State College at Buffalo.

The objectives of graduate study are to provide the atmosphere, research and programs which will permit and encourage superior educational opportunities for students interested in advanced work.

Graduate programs involving students in research play an essential role in the development of advanced instruction. Students who have demonstrated excellence by completing advanced courses of study and achieving significant results in their research make the biggest contribution to the graduate programs at State University College.



## Council

	Term Expires
Mrs. Bruce E. Wallis, <i>Chairman</i> .....	1981
Charles G. Blaine, <i>Vice Chairman</i> .....	1982
Mrs. John R. Campbell .....	1980
Peter Corson .....	1979
Dr. Walter B. Holland, Jr. ....	1984
David J. Laub .....	1978
Mrs. Harlan J. Swift .....	1983
Paul A. Tokasz .....	1985
Mrs. Henry Z. Urban .....	1977

## Administrative Officers

E. K. Fretwell Jr., Ph.D., *President*  
 Barbara R. Frey, Ed.D., *Vice President for Academic Affairs*  
 Robert A. Patterson, Ed.D., *Assoc., Vice President for Academic Affairs*  
 John P. Minahan, Ph.D., *Asst., Vice President for Academic Affairs*  
 James H. Young, Ed.D., *Vice President for Policy and Planning*  
 James A. Gold, D.Ed., *Vice President for Student Affairs*  
 Harry Ausprich, Ph.D., *Dean of Arts and Humanities*  
 Irene M. Hulicka, Ph.D., *Dean of Natural and Social Sciences*  
 Ralph W. Williams, Ph.D., *Dean of Applied and Professional Studies*  
 Theodore W. Kury, Ph.D., *Acting Dean of Graduate Studies and Research*  
 David B. Walch, Ph.D., *Dean of Academic Services*

## The Graduate Program

The College recognizes the different objectives pursued by students continuing academic and professional preparation beyond the baccalaureate level. Programs include: the Master of Science in Education with 22 areas of specialization; the Master of Arts with 6 major areas; and the Master of Science in Creative Studies. In addition, the Certificate of Advanced Study is available for individuals wishing additional preparation in administration and supervision. Preparation for a permanent teaching or principal's certificate is also available.

## Accreditation & Memberships

College programs have received both regional and national recognition. Significant affiliations include:

### Accreditations:

Board of Regents, The University of the State of New York  
 Middle States Association of Colleges and Secondary Schools  
 National Council for Accreditation of Teacher Education  
 American Chemical Society

### Memberships:

American Association of Colleges for Teacher Education  
 American Association of College Registrars and Admissions Officers  
 American Association of Emeriti  
 American Association of State Colleges and Universities  
 American Association of University Women  
 American Council on Education  
 American Library Association  
 Association of American Colleges  
 Association of College Unions  
 Great Lakes Historical Society  
 National Association of College and University Summer Sessions  
 National Association of Student Personnel Administrators  
 New York State Historical Association

## Classification of Students

A graduate student may be admitted as a degree student, a non-



degree student, or as a post-masters student depending on the student's qualifications and objectives.

### DEGREE STUDENT

A degree student is one who plans to become a candidate for an advanced degree at State University College and who has been admitted for advanced studies in a particular department or approved area of study.

The program of study is developed under the guidance of an advisor appointed by the head of the student's department or division. A student is not formally working toward a specific degree until he has been admitted to candidacy.

The degree student should be aware that all advanced degree programs at the State University College require at least 15 credit hours of course work at the 600 and/or 700 level.

### NON-DEGREE STUDENT

An applicant who does not wish to pursue an advanced degree at this institution may be admitted to enroll for course work as a non-degree student. This classification includes those who plan special programs not leading to an advanced degree. However, because classroom space is limited, preference will be given to students in degree programs.

### POST-MASTERS

A student who has received a master's degree from an accredited institution and who is seeking to continue enrollment in advanced course work is classified as a post-masters student. A student must enroll in at least one course each year to remain active in this classification.

### Admission

#### DEGREE PROGRAMS

An applicant for admission to the graduate program should understand that graduate work is not a simple extension of an undergraduate program. It operates at a higher level, demands scholarship of a higher order, and emphasizes research, creativity, and a professional competence with a minimum of formal requirements and a maximum of student initiative and responsibility.

Applicants must recognize that staff, facilities, and other resources are limited so that not all qualified persons can be admitted. The number accepted will vary by program and from semester to semester. In some graduate programs, all vacan-

cies will be filled long before the deadline for submitting applications, so early submission of an application increases the possibility of acceptance.

In general a student may begin his graduate work in fall, spring, or summer. For admission to graduate study, an applicant must:

- (a) have received an approved baccalaureate degree or the equivalent, i.e., one granted by a college or university which is accredited by an approved regional or national accrediting agency, or by a state university.
- (b) ordinarily have completed, in a satisfactory manner, a certain minimum of course work in designated areas, the specific courses and amount of work depending upon the field of work which the student proposes to enter.
- (c) submit scores on the aptitude portion of the Graduate Record Examination (GRE). The GRE is administered by the Educational Testing Service six times during each academic year. The test measures the general verbal and mathematical abilities of college seniors or graduates who plan to undertake graduate studies. Applications to take the GRE are available in the Graduate Office. Students should be aware that registration deadlines precede the test date by more than a month and that scores may not be forwarded by ETS to the Graduate Office for at least a month after the testing date. Therefore, students should arrange to take the GRE well in advance of College deadline dates for admission to degree programs.
- (d) have a cumulative grade point average of 2.5 (4.0) scale or better in the last 60 hours of the baccalaureate degree or a minimum combined Math-Verbal score of 1000 on the aptitude portion of the Graduate Record Examination.

Admission is granted jointly by the Graduate Office and the academic department in which the student plans to pursue his studies. Individual departments may establish higher grade-point averages, GRE requirements, or other criteria by which they judge candidates for admission. Departmental or program requirements are given in the descriptive statements appearing under the major programs listed in the latter part of this publication.

Applicants may apply for admission to only one program at a time. Two copies of all official transcripts, and the explanation of the grading system used, must be submitted to the Graduate Office. Transcripts must be mailed directly from the Registrars



of colleges previously attended; student copies are *not* acceptable. If an applicant is currently attending, or has graduated from State University College at Buffalo, it is not necessary to request a transcript from the Registrar's Office.

Applications should be returned as early in the semester preceding the first registration as possible. Applications received after March 1 for summer session, May 1 for fall semester, October 1 for spring semester have less chance of receiving favorable acceptance for the desired semester.

Admission may be granted to applicants whose credentials are not complete at the time of application if the baccalaureate degree has not been conferred or grades for the current term are not yet available. Such admission is subject to cancellation if the complete credentials, on arrival, do not meet the requirements for admission. If admission should, for any reason, be cancelled the student is automatically dropped from the graduate program.

### NON-DEGREE STUDENTS

To be eligible for enrollment in graduate level course work as a non-degree student, an applicant must submit two copies of an official transcript verifying the awarding of a baccalaureate degree from a regionally or nationally accredited college or university or the equivalent. Students in non-degree status are expected to maintain good scholastic standing. Failure to maintain at least a 2.75 after 12 credit hours in this status will result in dismissal.

Non-degree students may not take courses at the 600 and/or 700 level. These courses are restricted to degree and post-masters students only.

Because non-degree status is primarily for those students who have indicated they do not intend to pursue a graduate degree, a student should not expect to transfer credit earned in that status to a regular degree program. However, appropriate credits (not to exceed 6 credit hours) may be acceptable as part of the degree requirements upon approval of the major department.

Non-degree students who do not meet normal entry requirements may request transfer to a degree program after completing not less than 12 credit hours in non-degree status. Minimum College requirements for transfer under these conditions are a 3.5 GPA *plus* a combined quantitative-verbal score of at least 900 on the Aptitude portion of the Graduate Record Examination. Some departments may require additional provisions.

### POST-MASTERS STUDENTS

Applicants who wish to pursue graduate level course work in this status must submit *two* copies of an official transcript verifying the awarding of the Master's degree from an accredited College or University. Students are required to maintain at least a 3.0 average on all course work to remain eligible for further registration.

### FOREIGN STUDENTS

In addition to the general admission requirements for degree programs, foreign students for whom English is a second language must submit a certified English translation of all academic records. Foreign students who received their baccalaureate degree from a U.S. college or university must take the Graduate Record Examination. Those foreign students entering a U.S. institution of higher learning for the first time may apply for a waiver of the GRE. They must submit scores on the TOEFL examination. Normally, only students with scores of 550 or better are accepted for admission.

### UNDERGRADUATE STUDENTS

A senior student at State University College at Buffalo may apply for admission to graduate level coursework if the student has maintained a minimum GPA of 2.5 in the last 60 hours of coursework and a 3.0 GPA in the relevant area. The combined enrollment of undergraduate and graduate courses should not exceed 15 hours in any one semester. Permission of the instructor and approval of the student's department chairperson and the Dean of Graduate Studies is required before enrollment. Courses taken in this manner are related to the graduate program of study and normally will *not* apply to the undergraduate degree. These courses may be applied toward an advanced degree provided they are acceptable to the major program. The time limitation on the completion of the master's degree program applies to these as well as other credits. Undergraduate students may enroll in 500 level graduate courses only; they are not eligible to register for 600 and/or 700 level courses.



## Academic Regulations

### Statement on Student Responsibility

Graduate students must assume full responsibility for knowledge of rules and regulations of the College and departmental requirements concerning their individual degree programs. Since requirements and programs are subject to change, students at all times should be aware of current regulations. Between catalog issues, changes are announced in the *Graduate Newsletter*.

### Academic Load

Because students may have a tendency to carry overloads of such proportion as to handicap themselves in their academic work, the following restrictions govern registration:

- (a) Maximum load for full-time students is 12 credit hours per semester.
- (b) Students holding full-time employment are limited to 6 credit hours per semester.
- (c) During summer sessions students are permitted to earn a maximum of 12 credit hours at a rate of no greater than 1 credit hour per week (i.e., 2 credits for a 2-week program, 6 credit hours for a 6-week program, etc.).
- (d) Maximum course load for graduate assistants will vary according to assignment. Normally, the maximum load for graduate assistants is 9 credit hours per semester. Responsibility for approving specific maximum course loads rests with the student, his advisor, and the staff member controlling his service assignment or college employment.

### Academic Probation

After completing 12 hours of graduate level course work, a student in a degree program must have attained a minimum GPA of 3.0. If the student fails to do so, he/she will be placed on probation and will be given one semester (if a full-time student) or 9 hours (if a part-time student) to remove the deficiency provided the total does not exceed 6 semester hours beyond

the degree program. Failure to remove the deficiency during the probationary period will result in dismissal.

Non-degree students are required to maintain a 2.75 average after 12 hours of graduate level coursework. Failure to attain and/or maintain this average will result in dismissal.

Post-masters students must maintain at least a 3.0 average for all coursework. If a student's average drops below a 3.0, he will have until the completion of the next semester in which he is enrolled to bring his average to a 3.0. Failure to do so will make him ineligible for further registration.

### Admission to Candidacy

A candidate for a degree must meet the requirements set forth in the graduate catalog current at the time of the student's admission to candidacy. To complete candidacy requirements, the student must satisfy the following requirements:

- (a) Complete at least 6 credit hours of graduate coursework at this College.
- (b) Complete *all* required prerequisite courses.
- (c) Maintain at least a "B" average on all graduate work.
- (d) Obtain provisional certification (if required).
- (e) Remove all deficiencies and incomplete grades.
- (f) Complete the appropriate APPLICATION FOR ADMISSION TO CANDIDACY forms.

Failure to develop an approved program and be admitted to candidacy after 12 credit hours at the College may restrict further registration.

### Application for Degree

It is necessary for the student seeking the master's degree to complete an "Application for Graduation" before the appropriate deadline date listed on the graduate calendar. Those who fail to meet the requirements for graduation at the expected time must file a new application for the degree.

### Auditing Classes

A student who has registered for one or more classes may also audit a course if approved by the instructor of the course and if written notification is given to the chairperson of the department in which the course is to be offered.



## Course by Contract

Students who have been accepted into a graduate degree program and are academically in good standing may, with the permission of the instructor, chairperson of the department involved and the Graduate Dean, elect to take one or more courses by contract rather than by the usual method. The instructor must be a member of the Graduate Faculty of the College, and the course must be among those already approved by the College. Courses may be taken by contract only if they are not being offered in the regular schedule during the semester involved.

A student choosing this option will be provided with a course outline, bibliography and statement of his responsibilities and dates by which these are to be met. He is then free to pursue the course under the guidance of the faculty member. The number of conferences, the type of evaluation and the culminating activity will be determined by the faculty member and the student prior to registration for the course. These requirements must be filed with the department chairperson. Registration forms may be obtained from the Graduate Office.

## Course Numbering System

Courses in the series 1-499 are not listed in this bulletin because they are undergraduate and yield no graduate credit. A student may register for or audit these courses in order to make up deficiencies or fill gaps in his earlier preparation, but not to meet the requirements of an advanced degree.

- 500-599 Open to all graduate students
- 600-699\* Open to degree and post-masters students only, generally limited to majors and others with specific preparation.
- 700-799\* Advanced courses requiring greater preparation, open only to degree and post-masters students.

## Grade Point Averages

A cumulative average of "B" or better in *all* graduate courses completed at this College is required for the Master's degree. Transfer work is not included in the average.

\*At least 15 credit hours of course work at the 600 and/or 700 level are required in all degree programs.

## Grading System

Grades are given on the basis of the instructor's judgment of the student's scholarly achievement. Any one of 5 quality grades (A, B, C, D, or E) may be given for course work. The grade point equivalents are 4, 3, 2, 1, and 0 respectively.

At the graduate level, grades of A, B, and C may be applied toward credit requirements for a master's degree. D and E are failing grades and are not used to satisfy degree requirements. No more than 9 hours of C are normally accepted towards the master's degree; however, some degree programs may permit fewer than 9 hours of C work.

In the case of thesis or research work which carries forward from one semester to another (i.e., a two-semester project), the instructor may report the symbol "N" in place of a grade. This symbol indicates that the student has devoted an adequate amount of time to the work scheduled but gives no indication as to the quality of the work. When the work is completed, the instructor reports a grade of A, B, C, D, or E. This grade is considered to apply to the preceding semester(s).

If coursework is incomplete for reasons beyond the student's control, the instructor may award an "I" grade. The instructor will provide his chairperson with a brief description of the unfinished work and the grades the student has received on work already completed. Incompletes must be made up by the appropriate date within the following semester (see calendar on page 11). The Registrar is authorized to automatically record a grade of "E" for a student who has not fulfilled the requirements within the stipulated time period. "E" repeat provisions are not applicable to graduate course work.

The grades of "S" (satisfactory) and "U" (unsatisfactory) are reserved for student teaching or other field experience which is not normally evaluated by the usual letter grades. "S" and "U" grades may be given *only* for courses so designated in the Graduate Catalog.

A "W" grade may be given for an official withdrawal.

## Independent Study (590)

Independent study provides an opportunity for a student to pursue a topic which may be covered only briefly or not at all in the regular course offerings. *Independent study is never a substitute for a course already offered.*

Independent study may be offered by any member of the graduate faculty. All independent studies utilize the number 590



prefaced by the appropriate content area prefix.

Prior to initiating a graduate independent study, the student must register for it. To register, a student should obtain two copies of the appropriate form from the Graduate Office. This form describes the study to be undertaken, and it must be signed by the instructor, the department chairperson and the Dean of Graduate Studies and Research. Consult the academic calendar, page 11, for appropriate deadline dates.

## Registration

To assist the student in planning his program, the department chairperson will designate a member of the graduate faculty to serve as his advisor. It is the student's responsibility to secure the name of his advisor and to seek a conference *before* registration.

## PROCEDURES

Pre-registration information will be mailed each semester to active graduate students who have been registered during the previous year and to most newly admitted students. The mailing list is processed by computer and changes of name, address, program, or mechanical errors may result in omission from the mailing list. Every effort will be made to include all active students, *but there can be no guarantee that a student will be able to pre-register.* Those who cannot complete pre-registration by mail must register in person on the regular manual registration day.

## TIME OF REGISTRATION

Registration days are indicated in the calendar at the beginning of this bulletin. A student is expected to complete his registration during the officially designated periods and to attend the first meeting of all classes in which he is enrolled.

## CONTINUITY OF REGISTRATION

A student who has not completed a graduate course within three academic semesters (including summer session) will be dropped from the graduate program and must reapply for admission. Reapplication must be made in accordance with the established deadline dates and current admission requirements.

## CROSS REGISTRATION

Graduate course work at State University of New York at Buffalo and the State University Colleges at Brockport, Fredonia,

and Geneseo may be taken on a space available, cross-registration basis during the fall and spring semesters only. Credit taken at these campuses on a cross-registration basis is considered as transfer credit and must conform with college policies which govern transfer credit (See page 27).

## Residence Requirements

A candidate for an advanced degree is required to earn a minimum number of credits at Buffalo State. A course satisfies the requirements for residence if it is offered on the campus, at the college camp or at a branch established by the college.

A minimum of 20 hours of residence credit is required if the student is a graduate of a baccalaureate degree-granting unit of the State University of New York system or if the student is transferring graduate courses from another unit of the system. In all other instances, 24 hours of in-residence credit are required.

## Thesis, Research, Language & Comprehensive Examinations

Degree programs may require a thesis, guided research, a foreign language, a comprehensive examination, or other evidence of the student's mastery of his field. Information concerning these requirements is contained in the descriptive material outlining individual programs.

## Time Limitation

All course work and degree requirements must be met within a 6-year period immediately preceding the student's graduation.

## Transfer Credit

There is no automatic transfer of credit toward a graduate degree. *Subject to the limitations of residence requirements*, a maximum of 10 credit hours of graduate work completed in residence at another accredited institution may be applied toward an advanced degree at Buffalo State. Credit earned at another institution must be presented for consideration at the time the student applies for degree candidacy. No transfer of credit will be approved if the grade point average of all graduate work attempted at the transferring institution is less than 3.0 on a 4.0 system. Other restrictions which apply are:



- (a) The transfer work must be equal in scope and content to that offered by this college.
- (b) The transfer work must be a coherent part of the required program of study and approved by the major department.
- (c) The transfer work must meet the normal time limitation (within 6 years prior to graduation).
- (d) Only grades of "A" and "B" are acceptable for transfer. Grades of "S" and "P" are *not* acceptable.
- (e) Graduate credit is normally not granted for courses taken by correspondence.

## Tuition and Fees

The Board of Trustees of the State University of New York authorizes the collection of tuition and fees. The rates listed below are subject to review and change without prior notice.

Tuition and fees are billed in advance for pre-registered students. Students attending in-person manual registrations must pay appropriate tuition and fees on the day of registration.

### TUITION—FALL AND SPRING SEMESTERS

#### New York State Resident

12 semester hours (full time)	\$700.00 per semester
Less than 12 hours (part time)	58.50 per semester hour

#### Out of State Resident

12 semester hours (full time)	\$900.00 per semester
Less than 12 hours (part time)	75.00 per semester hour

#### College Fee

12 semester hours (full time)	\$ 12.50 per semester
Less than 12 hours (part time)	.85 per semester hour

### SUMMER SESSIONS

Tuition and fees are charged by the semester-hour rate during summer sessions. There is no full-time rate in the summer.

### REFUNDS

A student who is given permission to cancel his registration shall be liable for payment of tuition in accordance with the following schedule:

Liability During	Semester	6-Week Term	3-Week Term
1st week	0	0	0
2nd week	30%	70%	100%
3rd week	50%	100%	
4th week	70%		
5th week	100%		

*The College fee is non-refundable.*

### TEACHER WAIVER CERTIFICATES

Supervising (critic) teacher tuition waiver certificates may be redeemed in accordance with the regulations printed on the certificate. A certificate may be redeemed for any term scheduled to begin after the effective date but prior to the expiration date on the certificate. Waivers may be transferred between professional employees of the same school district. Transferred certificates must be duly signed by the district administrator. A maximum of eight hours may be waived during any one semester or summer term. If a student withdraws from a course at a time when partial or full tuition liability exists, the waiver certificate is forfeited. Waiver certificates do not cover the college fee. College fees must be paid by the student.

### Waiver of Academic Regulations

Students are expected to adhere to all regulations of the College. However, it is conceivable that unusual and extenuating circumstances may warrant a modification to certain College regulations. The student should not request a waiver of a College regulation retroactively and without strong evidence justifying such waiver.

Decisions on requests for waivers of academic regulations are made by the Dean of Graduate Studies and Research after consultation with the Graduate Academic Appeals Committee. The decision of the Dean is final. Requests must be made on a petition form available in the Graduate Office.

### Withdrawal from Courses

Dropping a course means cancelling registration in one or more courses. A student may drop a course before the official drop deadline (see the academic calendar, page 11) and receive a "W" for the course. Students should consult the instructor concerned before processing an official drop. A student who drops a course after the official deadline will receive a grade of "E" for



that course. If a student does not process an official drop and fails to continue with the course his grade will be "E".

An exception may be made for unusual circumstances beyond the control of the student. In such cases, procedures for "Waiver of Academic Regulations" will apply.

A student who does not register or withdraws from all courses during his first semester of registration must reapply for admission.

### **Workshops (594), Conferences (596), Micro Courses (598)**

Workshops, conferences and micro courses are graduate courses offered at variable times and places on particular themes outside of the usual semester schedule of classes. These courses also carry variable credit.

Workshops emphasize process and implementation of theory and involve participants in the accomplishment of individualized objectives on a specific theme. Conferences emphasize a unique and one-time experience on a given theme. Micro courses offer intensive instruction focused on a specific, limited objective related to discrete content.

Graduate students may include not more than six (6) hours of credit for workshops, conferences and micro courses in a Master's program.

## **Special Programs, Services and Facilities**

### **Academic Computer Center**

The Academic Computer Center provides batch and interactive computing facilities for students, faculty and staff. In cooperation with the Information Systems Management program, programming assistance is also provided for both faculty and students. Facilities include 14 keypunches, a Data 100 remote-job-entry terminal with a 600 card per minute reader and a 1000 line per minute printer, thirteen interactive terminals for general use at several locations, and two terminals for computer center staff usage. This hardware presently utilizes the extensive capabilities of the IBM 370/158 computer at SUNY Binghamton via leased telephone lines. Over 2600 students, faculty, and staff establish and use computer accounts each year.

### **Alumni Relations Program**

The Buffalo State Alumni Association promotes the welfare of the College and its alumni through active yearly social, educational and fund-raising programs directed by the Board of Directors and Executive Director. The funds raised are used for student scholarships and loan funds.

### **Career Counseling and Placement Services**

The Office of Career Counseling and Placement Services offers several significant services to graduate students. Counseling is available to those considering opportunities, requirements and procedures for obtaining employment; programs of and requirements for admission to graduate and professional schools; graduate study scholarships and other financial aids. A Career Library is maintained with current graduate school catalogs, reference materials on various careers and recruiting literature from schools, private and governmental agencies, businesses and industries.

Interviewing services are available. Recruiters from school districts and other organizations make arrangements to come



to the College to meet candidates for positions with their organizations. This recruiting calendar published in *The Record*, the campus newspaper, gives students an opportunity to schedule initial job interviews on campus. The Credentials Service helps candidates to assemble folders of personal data and references which may be used to support them in application for employment and/or further graduate study.

The forms necessary for registration and information concerning procedures to follow are available in May for all students expecting to graduate the following year. It is advisable for all prospective graduates to assemble credentials while they are on campus. Registration after graduation is certainly less convenient and may be costly in time and opportunities missed for want of credentials.

Active candidates are advised to maintain a close contact with the Career Counseling and Placement Services and to use *The Record* and the Placement Bulletin Board in the Union as constant sources of information about placement and career opportunities.

### **Charles Burchfield Center — Western New York Forum for American Art**

The Charles Burchfield Center is devoted to the exhibition of major works and memorabilia of Western New York's world famous watercolorist. In addition, as the Western New York Forum for American Art, it serves as a regional center for the study and research of American Art and encourages activities such as discussions, illustrated lectures and seminar activities relating to American Art.

### **College Learning Laboratory**

The Campus School complex provides opportunities for College students to observe and to participate in teaching and serves as a professional laboratory for experimental and innovative educational programs.

### **Continuing Education**

Extending higher education opportunities to the public at large is the concern of the Office of Continuing Education. Programs of part-time study for non-matriculated students are available through evening and Saturday morning courses. Part-time study may also be continued in the summer session.

The Office of Continuing Education also has a concern for bringing the resources of the College to the community in such problem areas as economic development, community planning, problems of urban planning, and service to local school systems. Such assistance may take the form of short courses, conferences, institutes, workshops, program planning, and consultation services.

### **Counseling Services**

The Counseling Center, located in Rockwell Hall, provides counseling services for the College community. Students with personal, academic, social, personality and vocational problems, and those with concern over the usage of drugs may use the services of the Counseling Center. The Counseling Center can provide information and assistance to help students make appropriate decisions and take appropriate actions in these areas. The staff are committed to complete confidentiality and are trained as clinical therapists.

### **Creative Studies**

The Creative Education Foundation, Inc. is housed on the campus and sponsors Creative Studies as part of the College's regular academic program. The Foundation publishes the *Journal of Creative Behavior* and sponsors workshops and institutes dealing with creative behavior and problem-solving. See M.S. in Creative Studies as described on page 47.

### **Faculty-Student Association**

The Faculty-Student Association (FSA) is a not for profit, educational, and benevolent membership corporation which provides auxiliary services to students, staff, and faculty in achieving the overall education objectives of the College. The Association is governed by a fifteen-member Board of Directors comprised of seven students, three faculty members, one non-teaching professional, three administrators, the immediate past president of FSA and one alumnus. Any member of the College community is welcome to attend Board meetings which are usually held once a month. The FSA has a contract with the State University by which it is granted the privilege to operate auxiliary services. The State University provides the space and utilities at no expense to the FSA. The FSA operates the following activities:



### **BUSINESS OFFICE**

The FSA Business Office provides accounting services for the Food Service Department, the College Store, the College Pub and the Faculty Dining Room.

### **COLLEGE FOOD SERVICES**

College Food Services, a Division of FSA, provides dining facilities for resident students and a number of public food service facilities, including a restaurant and cocktail lounge, College Pub, Snack Bars and full-range Cafeteria.

### **COLLEGE STORE**

For the convenience of the campus community the College Store sells educational and related materials, including books and supplies required for course work. The Store, which is located in the basement of the College Union, is open Monday-Friday from 8:00 a.m. to 5:00 p.m.; and Saturdays from 10:00 a.m. to 2:00 p.m. For those wishing credit, the Store honors the Empire and Master Charge credit cards.

### **Financial Aid**

Financing a college education can be a perplexing and disturbing problem for many college students. Recognizing this, the College provides a Financial Aids Office where students can receive advice and assistance.

Operating on the premise that every qualified student deserves an education, the College participates in the Federal student aid programs as set forth in the Higher Education Amendments of 1972, the College Work-Study Program authorized under the Higher Education Act of 1965, the Law Enforcement Education Program, and other assistance programs.

Only students enrolled in degree programs are eligible for financial aid.

### **GRADUATE ASSISTANTSHIPS**

Graduate assistantships and internships are available through various departments and the Office of Student Affairs. Duties of graduate assistants vary and consist of non-teaching functions such as grading papers, monitoring exams, assisting in administrative assignments, or participating in library or field research projects. Assignments, which vary from 12-20 hours per week, receive stipends from \$1800 to \$2800 per academic

year. In addition to the stipend, a "full-time" graduate assistant receives remission of tuition for the academic year.

Application forms may be obtained from the Office of Student Affairs or the department in which the student is majoring and should be filed by March 1.

### **MONSIGNOR BOGACKI FELLOWSHIP**

This fellowship provides a \$500 award annually for a student who has "evidenced a sincere and serious interest in Polish culture or history, and who is or will become enrolled as a graduate student in Buffalo State College in a program with emphasis on Polish and East European studies and, if not then enrolled in a regular graduate program, has demonstrated an ability to handle successfully work in the areas of Polish culture and history." Application should be made to Dr. F. T. Siemankowski, Coordinator for the Program in East European and Slavic Studies.

### **MARGARET A. GRANT GRADUATE AWARD**

This scholarship is funded by the Home Economics alumni. To be eligible for the Award a student must have completed 12 credit hours toward a Master of Science in Education degree and be an accepted candidate in the Home Economics Education program with a grade point average of 3.0 or above. The Award is based on leadership, professional intent and economic circumstances. Decisions on applications are made by a faculty committee including a member of the graduate faculty of the Home Economics Department.

Students must obtain an application form in Caudell Hall 207 after February 18, complete and return it with supporting evidence by April 7. The awardees are announced in May and receive their checks in September. In the event the recipient fails to continue with the graduate program during the subsequent semester, the money will be transferred to the next qualified candidate.

### **ALUMNI ASSOCIATION AWARD**

An Alumni Association Award of \$200 is available to a matriculated graduate student who is an alumnus of Buffalo State and is a paid member of the Alumni Association. An application for the graduate stipend may be picked up in either the Alumni Office or the Office of Financial Aids during the months of February or March. Applicants will be informed of the winner in April. The stipend will be awarded upon verifica-



tion of registration in any subsequent term. The award will be based on need, academic achievement, and worthiness as indicated through required references.

## LOANS

### National Direct Student Loan

Full-time and half-time graduate students can apply for up to a maximum of \$2,500 per year. Total educational (undergraduate and graduate) loan money borrowed cannot exceed \$10,000. Repayment with three percent interest begins nine months after leaving college and may be spread over ten years. There is no interest while the student is enrolled on a half or full-time basis. Those who teach in a "depressed area," as defined by the government, or teach exceptional education may have up to 100% of their loans cancelled over a five-year period.

### New York Higher Education Assistance Bank Loans

Full-time and part-time students who are residents of New York State and show evidence of financial need may borrow under this plan from a local bank. Repayment begins nine months after leaving college and may be spread over ten years. There is no interest while attending college and seven percent after graduation or withdrawal. Applications may be secured from most banks or the Office of Financial Aid for Students. Usually the student must be a resident of a community considered by the bank to be in its lending area. Students should apply to a local bank where they, or their parents, have been customers or depositors. Applications may be made at any time.

## EMPLOYMENT

The Office of Financial Aid to Students assists students in meeting some of their expenses through part-time employment on campus or in the community. A major aspect of part-time employment is the College Work-Study Program. This program is a form of financial aid funded through the federal government and the college or off-campus agencies. Generally, eligible students may work up to a maximum of fifteen (15) hours per week. Positions are available in most college departments and many off-campus agencies.

In addition to the College Work-Study Program, there are a limited number of on-campus part-time positions with the Faculty-Student Association.

## Health Center

**Health Facilities on Campus** — The College maintains student health facilities on campus for first-aid and general health services with offices in the Weigel Health Center. The College physician and part-time physicians are available in the Center, Monday through Friday, for diagnosis and medical care of students. A staff of registered professional nurses is also available.

**The Campus Health Program** — The College Health Services provides medical examinations without charge in certain special cases, as well as for all athletes prior to their engaging in competitive sports.

Necessary laboratory tests are made when advisable. From time to time certain preventive health measures are offered to students such as flu vaccine. Immunizations are given only with the consent of the parent to students under 21 years of age. Parents and students will be informed at the time of any new undertaking. It is highly recommended that parents consent to have their sons and daughters participate in these programs for the optimum health of the College community.

**Community Medical Resources** — The College maintains a close relationship with hospitals and selected medical specialists in the community as an additional safeguard to the health of its students.

## Housing

**Residence Halls** — Living accommodations offered in the eleven residence halls provide various types of living styles. Different emphases offered within the halls include International House, graduate student area, and transfer student area, among others.

Most rooms have facilities for two students and are furnished with beds, built-in wardrobes, dressers and study desks. Lounges, recreational facilities, and laundry rooms with washers and dryers are provided. Students need to provide their own pillows, blankets, bedspreads, window draperies, study lamps and irons. Graduate students are encouraged to apply to the Housing Office for staff positions in residence halls.

## In-Service Education

Service to school personnel to update their skills and knowledge or to acquire new skills to meet the changing needs



of Buffalo's school aged population is an important aspect of the College's mission in teacher education and its commitment to the urban community. Through the Office of Graduate Studies and Research and the Dean of the Faculty of Applied and Professional Studies, the College plans and coordinates in-service education with area schools and educational agencies to identify and satisfy their instructional needs.

## Instructional Resources

The Instructional Resources staff supports the faculty in its use of appropriate media by providing the necessary equipment; producing audio and videotapes, slides, graphics and transparencies for instruction; and providing a campus-wide television system via which visual media may be transmitted. A Film Rental Library provides 16mm films and videotapes to faculty members, student teachers, schools and community organizations throughout New York and surrounding states.

## Library

The Edward H. Butler Library, with a seating capacity of over 2,000, is one of the newest contemporary buildings on campus housing a collection of over 350,000 volumes, 2,700 current periodicals, and an extensive collection of microforms and other non-print materials. It can ultimately accommodate 500,000 volumes, with all available on open shelves. A *Library Handbook* containing a list of library services, hours, maps, and other pertinent data is available upon request in the reference department. An Independent Learning Center provides multi-media self-instructional facilities.

## Teacher Corps

This program is a cooperative effort of the College and the Buffalo Public School System. It represents a systematic approach to inner city educational change.

The College has cooperated with Teacher Corps since the inception of this federally funded program in 1966. Program cycles are of two-years duration. The present cycle will conclude in June 1978.

The program offers the opportunity for a limited number of highly qualified individuals to undertake a graduate, field-centered teacher education experience leading to a Master's Degree in Elementary Education and permanent New York

State certification. The curriculum stresses a diagnostic-prescriptive approach to teaching in the regular classroom. Students admitted to the program spend at least twenty-five hours per week in inner city elementary school settings. These students also participate in community activities as an integral part of their program experience.

The program includes an in-service education component that provides additional diagnostic-prescriptive teaching skills to Buffalo Public School teachers in the inner city area.

One of the participating inner city schools is designated a community school. This school is a center in which adult needs are met through late afternoon and early evening activities. Many individuals and organizations cooperate in the planning and implementation of these adult-centered activities.

## Teacher Corps/Peace Corps

This program is a cooperative effort of the Faculty of Professional and Applied Studies of the College, the Lackawanna City School System, and the Republic of Korea. It represents a systematic approach to educational change. It also provides the Republic of Korea with the services of highly skilled teachers in Industrial Arts areas such as construction and manufacturing.

Teacher Corps/Peace Corps has been in operation at the College since 1971. Teacher Corps/Peace Corps program cycles are three years in duration. During the first year of each cycle, the program is field-centered in the Lackawanna City School System. During the second and third years, program participants serve as Peace Corps volunteers in the Republic of Korea. The present three-year cycle began in July 1977.

The program offers the opportunity for a limited number of highly qualified individuals to undertake a graduate experience leading to a Master's Degree in Industrial Arts and permanent New York State certification, or leading to provisional New York State certification in Industrial Arts, depending upon the entry level of the student. The curriculum stresses a diagnostic-prescriptive approach to teaching Industrial Arts, as well as cross-cultural education. During the first year of the program, students spend at least twenty-five hours per week in inner city school settings. These students also participate in community activities as an integral part of their program experience. During the second and third years, students complete program requirements by teaching and learning in the Republic of Korea.



## Graduate Degree Programs

Graduate degree programs of the State University College are offered by departments and approved study areas (interdepartmental and nondepartmental). These academic units are grouped under three faculties, each with an academic dean, who acts as the administrative officer of the faculty. The three faculties are: Applied and Professional Studies, Arts and Humanities, and Natural and Social Sciences.

In the pages which follow, the graduate degree programs offered by the College are described, including the admission and program requirements for each. A listing of all courses, alphabetically by content, is included at the end of the catalog.

DEGREE	AREAS OF STUDY	PAGE
<b>Master of Arts</b>	Biology	43
	Chemistry	44
	English	54
	History	65
	Mathematics	70
	Physics	73
<b>Master of Science in Education</b>	Art Education	41
	Biology—Secondary	44
	Chemistry—Secondary	46
	Communication Disorders	57
	Elementary Education	48
	English—Secondary	55
	General Science—Secondary	63
	Geosciences—Secondary	64
	Home Economics Education	66
	Industrial Arts Education	68
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	Mathematics—Secondary	71
	Mental Retardation	60
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	Social Studies Education	76
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DEGREE	AREAS OF STUDY	PAGE
<b>Master of Science</b>	Creative Studies	47
<b>Certificate of Advanced Study</b>	School Administration & Supervision	74

## ART EDUCATION

### Master of Science in Education

#### PROGRAMS

The Art Education Department offers graduate programs for specialization in alternative areas of study.

Within these required areas, the department has identified course sequences which will enable the student to pursue a specialization in any one of the following:

1. Art Education
2. Art For People with Exceptional Needs
3. Art Education Instructional Communications Development
4. Interdisciplinary Arts/Humanities
5. Studio (Fine Arts and/or Design)

#### ADMISSION PREREQUISITES

1. A bachelor's degree from an accredited college or university with a major in Art Education.
2. A provisional certificate for teaching.
3. Undergraduate cumulative average of 2.5 or better on a 4 point scale.
4. Any additional requirements as may be mandated by the college or department for general admission or for admission to a concentration.

#### CANDIDACY

1. General College Policy as specified by college policy (see Admission to Candidacy in Graduate Catalog).
2. Departmental Policy
  - a. Students, after consultation with advisors will propose in writing programs within their area of concentration.



- b. A student will plan course work and experiences appropriate to the development of the concentration which must be approved by the faculty advisor.
- c. A list of faculty advisors will be available to students in the Art Education Department Office, BI 150.
- d. Completion of department requirements for degree approval are contingent upon a final review by the chairperson of the department.

## PROGRAM REQUIREMENTS

	Credit Hours
<b>Professional Art Education Core Required</b> .....	<b>9-12</b>
AED 602 Research Workshop in Art Ed. (Pre-req. EDU 694) .....	3
AED 605 Seminar in Art Ed. (Pre-req. AED 602) .....	3
During Art Education course 602 and 605 students will identify, define and establish the procedures for completing either a Masters project or Thesis.	
AED 690 Master's Project .....	3
DES 690 Master's Project .....	3
FAR 690 Master's Project .....	3
or	
AED 695 Master's Thesis .....	6
<b>General Studies component</b> .....	<b>6</b>
EDU 694 Research Methods and Techniques (required) .....	3
Any one behavioral course (Behavioral Studies or Psychology departments) ...	3
<b>Content Area - Design/Fine Arts</b> .....	<b>9</b>
Students may select courses from each of the studio departments or concentrate in one department only.	
<b>Unrestricted Electives</b> .....	<b>3-6</b>
Note: 3 cr. hours only, if Master's Thesis is elected.	
<b>TOTAL REQUIREMENTS</b> .....	<b>30</b>
Note: A minimum of 15 hours of graduate work must be completed in 600 or 700 level courses.	

## BIOLOGY

### Master of Arts

#### ADMISSION PREREQUISITES

1. Bachelor's degree, or its equivalent, from an accredited college or university.
2. An undergraduate minimum grade point average of 2.5 on a 4.00 point basis.
3. Acceptable scores on the verbal, quantitative, and biology sections of the Graduate Record Examination.
4. Three letters of recommendation evaluating academic and personal qualifications.
5. A minimum of forty-eight semester hours of course work in science and mathematics. These shall include one year each of college physics, organic chemistry, and mathematics. The mathematics requirement may be satisfied by calculus or statistics, depending on the needs of the student's program. Applicants with deficiencies may be admitted with probationary status until such deficiencies are removed.

#### PROGRAM REQUIREMENTS

1. A minimum of thirty semester hours; these shall include six semester hours allocated as thesis credit.
2. A minimum cumulative average of 3.00 on a 4-point basis. The candidate shall take no more than thirty-six semester hours to achieve this average.
3. Proof of competence in one modern foreign language. Upon recommendation of the candidate's Thesis Committee, this requirement may be met through an appropriate combination of Biometrics and Computer Science.
4. Successful oral defense of a written thesis based on the candidate's research in an area of biology.
5. With prior approval of his major professor, a student may cross register for graduate work at any unit of SUNY West. In addition, graduate course work is available in conjunction with Roswell Park Memorial Institute.



## BIOLOGY

### Master of Science in Secondary Education

#### ADMISSION PREREQUISITES

1. Bachelor's degree, or its equivalent, from an accredited college or university.
2. An undergraduate minimum grade point average of 2.5 on a 4.00 point basis.
3. Acceptable scores on the verbal quantitative sections of the Graduate Record Examination.

#### PROGRAM REQUIREMENTS

	Credit Hours
Biology Courses (600-level, by advisement) .....	12-15
Science Education Courses (Required) .....	9
SCI 628 Seminar in Secondary Science Education .....	3
SCI 632 Curricular Trends in Secondary School Science .....	3
SCI 685 Evaluation in Science Education .....	3
Research Component (Choice of one) .....	3-6
SCI 695 Research Methods in Science Education .....	3
BIO 690 Master's Project in Biology .....	3
BIO 695 Thesis .....	6
Unrestricted Electives (600-level) .....	3
TOTAL REQUIREMENTS .....	30

## CHEMISTRY

### Master of Arts

#### ADMISSION PREREQUISITES

1. A bachelor's degree from an accredited college or university.

2. A minimum of 24 semester hours of chemistry, including one year of physical chemistry, with a cumulative average of 2.60 on a 4.00 scale in all chemistry courses. One year of general physics and mathematics through differential and integral calculus.
3. A minimum combined score of 900 on the General Aptitude sections and a minimum score of 500 on the Advanced Chemistry section of the Graduate Record Examination.
4. Three letters of recommendation.

#### PROGRAM REQUIREMENTS

1. A cumulative average of 3.00 on a 4.00 scale, for the courses applied toward the degree. A student who receives more than three credit hours of E, or more than six credit hours (representing any combination) of C, D, and/or E will not be eligible to receive the Master of Arts degree in chemistry.
2. Demonstrated competence in a foreign language. A computer language may be submitted in lieu of the foreign language.
3. A successful oral defense of a thesis based upon the candidate's research in chemistry.

#### Required areas of study

	Credit Hours
CHE 604 Graduate Chemistry Seminar .....	1
CHE 605 Kinetics and Reaction Mechanisms .....	3
CHE 625 Structure Analysis I. Spectroscopic Methods .....	3
CHE 626 Structure Analysis II. Non-Spectroscopic Methods .....	3
CHE 690 Oral Defense of Thesis .....	2
CHE 795 Research Thesis in Chemistry .....	6

#### Electives under Advisement

- a. A minimum of one additional 600-level Chemistry course, or CHE 510, or CHE 535 .....
  - b. Any combination of approved 500, and 600-level courses in the sciences or mathematics .....
- TOTAL REQUIREMENTS .....



## CHEMISTRY

### Master of Science in Secondary Education

#### ADMISSION PREREQUISITES

1. A bachelor's degree from an accredited college or university.
2. A provisional New York State secondary teaching certificate.
3. A minimum of 24 hours of undergraduate chemistry courses including one year of physical chemistry.
4. A minimum of one year each of calculus, general physics, biology, and geosciences.

#### PROGRAM REQUIREMENTS

	Credit Hours
<b>Required Courses</b> .....	15

Nine hours selected from the following:

CHE 500	Chemistry: Its History, Philosophy and Role in Society .....	3
CHE 510	Special Topics in Inorganic Chemistry .....	3
CHE 535	Special Topics in Organic Chemistry .....	3
CHE 605	Kinetics and Reaction Mechanisms .....	3
CHE 607	Chemical Thermodynamics .....	3
CHE 625	Structure Analysis I: Spectroscopic Methods .....	3
CHE 626	Structure Analysis II: Non-Spectroscopic Methods .....	3
CHE 642	Biochemistry II .....	3
CHE 660	Advanced Laboratory Techniques .....	3

Six hours selected from the foregoing and/or from among the following:

CHE 590	Special Project .....	3
CHE 690	Master's Project in Chemistry .....	3
CHE 795	Research Thesis in Chemistry .....	6

#### Research .....

Three hours selected from the following:

*CHE 690	Master's Project in Chemistry .....	3
*CHE 795	Research Thesis in Chemistry .....	6

\*Can be counted toward the 15 hr. requirement in chemistry.

Credit  
Hours

SCI 694	Research Methods and Techniques in Science Education .....	3
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#### Science Education .....

SCI 628	Seminar in Secondary Science Education .....	3
SCI 632	Curricular Trends in Science Teaching in the Secondary School .....	3
SCI 685	Evaluation in Science Education .....	3

#### Unrestricted Electives .....

<b>TOTAL REQUIREMENTS</b> .....	<b>30</b>
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## CREATIVE STUDIES

### Master of Science

An interdisciplinary graduate program leading to a Master of Science degree is offered in cooperation with the Creative Education Foundation. The program is designed for qualified students (1) to integrate creative approaches to learning, problem-solving, research, or curriculum development in the particular areas of their undergraduate majors and (2) to prepare themselves to introduce the research-based Creative Studies courses in other institutions.

#### ADMISSION REQUIREMENTS

1. Compliance with S.U.C.B. general requirements for admission to graduate degree programs.
2. A minimum of 9 credits in Creative Studies or equivalent. The equivalent might include Creative Problem-Solving Institutes, creative problem-solving courses or workshops, and other creativity programs having similar curricula.
3. Introductory course in psychology, sociology, or philosophy (preferably all three).
4. Written statement of background and purpose.
5. References from professors of Creative Studies and other faculty.
6. Interview and acceptance by Creative Studies graduate committee.



## PROGRAM REQUIREMENTS

	Credit Hours
CRS 610 Nurturing Creative Behavior .....	3
CRS 615 Master's Seminar .....	3
CRS 625 Advanced Creative Problem-Solving Institute .....	2-4
CRS 670 and/or CRS 680 Team-Teaching I and Team-Teaching II .....	3-6
CRS 690 Master's Project .....	3-6
CRS 795 Master's Thesis .....	3-6
<b>Electives by advisement</b> .....	3-15
(including 3 credits in the study of creativity in relation to undergraduate major, preferably as offered by that major department or under independent study with its faculty)	
<b>TOTAL REQUIREMENTS</b> (minimum of 17 in Creative Studies) .....	30

### FINANCIAL ASSISTANCE

Scholarships for Creative Problem-Solving Institutes are available to graduate students accepted into the Creative Studies Master's Program. One or two \$2,000 stipends with tuition waiver are available per year, on application and acceptance, for Administrative Internship or Resident Directorship.

## ELEMENTARY EDUCATION ELEMENTARY EDUCATION & EARLY SECONDARY EDUCATION

### Master of Science in Education

The Applied and Professional Studies Faculty offers programs leading to the Master of Science in Education degree (including permanent certification) and programs designed for non-degree students seeking permanent certification as elementary school (N-6) teachers or elementary and early secondary school (N-9) teachers. Applicants may select from a number of program options dependent upon admission criteria. All successful applicants must fulfill College requirements for graduate study.

Each student accepted for graduate study and his advisor are responsible for planning a series of graduate experiences designed to fulfill

program requirements as well as to develop a master teacher with a particular area of competence. The candidate is free to draw upon all resources of the College which contribute to his professional purposes. An area of concentration must be chosen no later than the conclusion of twelve hours of work. Available clusters are listed by departments. Students in the early secondary program will be required to take nine hours in the appropriate area of specialization. Areas leading to the Master of Science in Elementary Education and Early Secondary Education include Mathematics, English, Science and Social Studies.

### ADVISEMENT

A form entitled "Suggestions for Your First Registration" is mailed to all Elementary Education students along with their acceptance into the Graduate Program. Initial course selections are to be made by adhering to the instructions included on this form. Students with special problems may secure additional information by contacting the office of the Coordinator of Graduate Advisement.

The Coordinator of Graduate Advisement will serve as interim advisor until such time as an advisor is selected or appointed. An advisor must be chosen no later than the completion of 6 credit hours. It is at this time that students shall apply for Admission to Candidacy.

Students must choose an area of concentration (cluster) at this time and plan the remainder of their program in consultation with their advisor.

The student may exercise 3 options for an emphasis in Reading within the Elementary Education M.S. Cluster.

The student and his advisor, after review of the student's prior experiences and education will plan his graduate work within the framework of the program he has selected. It will be their joint responsibility to examine this program periodically, to assess the growth that is resulting from it, and to revise and enrich it wherever this is appropriate.

### Category I

#### ADMISSION PREREQUISITES

Each applicant shall have

- an earned bachelor's degree from an accredited college or university
- a 2.5 (on 4 point scale) grade point average over the last sixty hours of undergraduate work or a score of 1000 on G.R.E.
- provisional New York State certification for either elementary or elementary and early secondary teaching (or approved equivalent)



## PROGRAM REQUIREMENTS

	Credit Hours
<b>A. General Requirements</b> .....	6
Psychological Foundations of Education .....	3
Historical, Philosophical & Social Foundations of Education .....	3
<b>B. Research Requirements</b> .....	3-9
EDU 694 Research Methods and Techniques .....	3
EDU 690 Master's Project .....	3
EDU 695 Thesis .....	6
<b>C. Major Field Concentration</b> .....	15-18
Approved cluster of courses including at least nine hours in Education Division offerings.	
<b>D. Seminar in Elementary Education or Secondary Education (EDU 601 or EDU 532)</b> .....	3
TOTAL REQUIREMENTS .....	30
<b>E. At least fifteen (15) hours of graduate work must be completed in courses at the 600 or 700 level.</b>	

### Category II

#### ADMISSION PREREQUISITES

Each applicant shall have

- a bachelor's degree from an accredited college or university
- a 2.5 (on a 4 point scale) grade point average over the last sixty hours of undergraduate work or a score of 1000 on Graduate Record Exam
- provisional New York State certification for teaching in secondary school or in special fields K-12 (or approved equivalent)

#### PROGRAM REQUIREMENTS

	Credit Hours
<b>A. General Requirements</b> .....	6
Psychological Foundations of Education .....	3
Historical, Philosophical & Social Foundations of Education .....	3
<b>B. Research Requirement</b> .....	3-9
EDU 694 Research Methods and Techniques .....	3
EDU 690 Master's Project .....	3
EDU 695 Thesis .....	6

	Credit Hours
<b>C. Elementary Education Concentration</b> .....	15-18
Approved courses in Elementary Education .....	9
Reading and Language Arts .....	6
<b>D. Seminar in Elementary Education or Secondary Education (EDU 601 or EDU 532)</b> .....	3
TOTAL REQUIREMENTS .....	30
<b>E. Demonstrated competence in teaching in an elementary classroom. Consult Department Office concerning fulfill- ment of this requirement.</b>	
<b>F. At least fifteen hours of graduate work must be completed in 600 or 700 level courses.</b>	

### Category III

#### ADMISSION PREREQUISITES

Each candidate shall have

- a bachelor's degree from an accredited college or university
- a 2.5 (on a 4 point scale) grade point average over the final sixty hours of undergraduate work or a score of 1000 on Graduate Record Exam.

#### PROGRAM REQUIREMENTS

<b>A. General Requirements</b> .....	6
Psychological Foundations of Education .....	3
Historical, Philosophical & Social Foundations of Education .....	3
<b>B. Research Requirements</b> .....	3-6
EDU 694 Research Methods and Techniques .....	3
EDU 690 Master's Project .....	3
<b>C. Elementary Education Concentration</b> .....	18
Approved courses in Elementary Education .....	12
Reading and Language Arts .....	6
<b>D. Seminar</b> .....	3
EDU 601 Seminar in Elementary Education .....	3
TOTAL REQUIREMENTS .....	30
<b>E. Demonstrated competence in teaching in an elementary classroom. Consult Department Office concerning fulfill-</b>	



ment of this requirement. Program must include 24 hours in education courses to satisfy certification requirements.

- F. At least fifteen (15) hours of graduate work must be completed in 600 or 700 level courses.

## Permanent Certification Requirements

Effective January 1, 1978, students who graduate with provisional certification will be required to complete a master's program in the appropriate area to be eligible for permanent certification. Students who completed their provisional certification prior to January 1, 1978 should seek advice on permanent certification from the department chairperson's office.

## Areas of Concentration (Clusters)

Candidates are required to choose an area of concentration early in their programs. (No later than at the conclusion of 12 credit hours.) Descriptions of these clusters, with the recommended courses in each, are available in the offices of the respective departments and in the office of the Coordinator of Graduate Advisement.

Available clusters are listed under Departments as follows:

## BEHAVIORAL AND HUMANISTIC STUDIES DEPARTMENT

DR. CHARLES P. LA MORTE, *Chairperson*  
Room 308 Bacon Hall

### Cluster

### Major Advisor

- |                                 |  |
|---------------------------------|--|
| 1. Child Development Consultant | Dr. Ferster, Dr. Khan,<br>Dr. Martorana, Dr. Penn                                    |
| 2. Comparative Education        | Dr. Colletta   |
| 3. Cross-Cultural Education     | Dr. Colletta   |
| 4. Early Childhood Education    | Dr. Febel, Dr. Khan  |
| 5. Educational Psychology       | Dr. Egan, Dr. Ferster,<br>Dr. Fink, Dr. Howe,<br>Dr. Khan, Dr. Penta,<br>Dr. Rotella |
| 6. Guidance and Counseling      | Dr. Fink, Dr. Khan,<br>Dr. McCowan, Dr. Rotella                                      |
| 7. History of Education         | Dr. Grande   |

8. Human Development:  
General, Early Childhood,  
Childhood, Adolescence

Dr. Converse, Dr. Egan,  
Dr. Febel, Dr. Fink,  
Dr. Glenn, Dr. Khan,  
Dr. Martorana, Dr. Moran,  
Dr. Penn, Dr. Rotella

9. Human Relationships and  
Group Dynamics

Dr. Fink, Dr. Glenn,  
Dr. Howe, Dr. Rotella

10. Philosophy of Education

Dr. Grande

11. Social Foundations

Dr. Diulus, Dr. Palmer

12. Program in College  
Student Personnel  
Services

Dr. La Morte

## CURRICULUM AND SUPERVISION DEPARTMENT

DR. GERALD O. PAYNE, *Chairperson*  
Room 302 Bacon Hall

### Cluster

### Major Advisor

- |                                       |   |
|---------------------------------------|---|
| 1. Elementary Education               | Dr. Barnett, Dr. Eddins,<br>Dr. Schimizzi,<br>Dr. Woodworth                                 |
| 2. Curriculum                         | Dr. Benz, Dr. Bruno,<br>Dr. Pearson   |
| 3. Urban Education                    | Dr. Fischle   |
| 4. Reading - Teacher<br>or Specialist | Dr. Attea, Dr. Cohen,<br>Dr. Nichols, Dr. D. O'Brien,<br>Dr. Swett, Dr. Walker,<br>Dr. Ware |
| 5. Early Childhood                    | Dr. Chalmer, Dr. Cooperman,<br>Dr. Schrader, Dr. Woodard                                    |
| 6. Early Secondary                    | Dr. Elmes   |
| 7. Administration/Supervision         | Dr. Gittler   |
| 8. (CAS) Program                      | Dr. Hemink, Dr. Payne   |

The following additional faculty within the Department advise in the areas of Elementary Education, Open Education and Instructional Supervision:

**Major Advisors:** Dr. Amrozowicz, Dr. Dowski, Dr. Flavin, Dr. Frazita, Dr. Perez, Dr. Schunak.



## ENGLISH

### Master of Arts

#### ADMISSION PREREQUISITES ..... 36

1. Bachelor's degree from accredited college or university.
2. Undergraduate cumulative average of 2.75 and average of 3.00 in English on a 4.00 scale.
3. Acceptable scores on the Graduate Record Examination.
4. Thirty-six (36) semester hours in English exclusive of freshman English.

#### PROGRAM REQUIREMENTS

##### Language Requirement

Demonstrated competence in one foreign language.  
Demonstrated competence in written and oral English.  
These competencies must be established prior to the completion of eighteen (18) semester hours.

##### Required Areas of Study ..... 18-24

Courses to be chosen, under advisement, in the following areas so that the student will have in his combined undergraduate and graduate record *at least* one course in each area.

Linguistics or History of the English language  
Chaucer or Milton  
Shakespeare or Elizabethan Writers  
Seventeenth or Eighteenth Century  
English Literature  
Nineteenth Century English Literature  
American Literature  
World Literature  
Twentieth Century Literature  
Criticism  
Research in Literature and Language

##### Thesis ..... 0-6

A student may elect, under advisement,  
ENG 695 Thesis (6 semester hours) or  
ENG 690 Master's Project (3 semester hours).

##### Electives in English or other academic areas under advisement ..... 6

##### TOTAL REQUIREMENTS ..... 30

Credit  
Hours

## ADVISEMENT

Each student is assigned an advisor, and it is imperative that students regularly consult with their advisors. All students must have their program of study approved by their advisor and the department chairperson.

## ENGLISH

### Master of Science in Secondary Education

This graduate program, leading to a professional degree, is designed to provide maximum flexibility in meeting individual interests while ensuring a broad understanding of the various aspects of the teaching of English. The aim of the program is to develop highly qualified teachers who are prepared to exercise leadership in the profession.

Credit  
Hours

#### ADMISSION PREREQUISITES ..... 36

1. Bachelor's degree from an accredited college or university.
2. Undergraduate preparation including six hours in composition and/or communication and preparation in linguistics, literature for adolescents, English literature, American literature, world literature, speech and/or oral interpretation, and advanced writing.
3. Thirty-six (36) semester hours in English exclusive of freshman English.
4. Eligibility for New York State Provisional Certificate or approved equivalent.

##### Advisement

Each student is assigned an advisor, and it is imperative that students regularly consult with their advisors. All students must have their program of study approved by their advisor and the department chairperson.

#### PROGRAM REQUIREMENTS

##### Required English Courses ..... 18

To be specified by advisor after review of the student's previous preparation.

##### Research ..... 3-6



Required of all students who are candidates for the master's degree. Each candidate, after a conference with his advisor, must select one of the following:

ENG 693	Research Design in Teaching of English .....	3
ENG 694	Research in Literature and Language .....	3
ENG 690	Master's Project .....	3
ENG 695	Master's Thesis .....	6

#### Professional Education ..... 9

A selection, to be taken under advisement, of nine hours including one course from at least two of the following professional course areas designed to meet the needs of degree students with varied academic and professional backgrounds:

Testing and Evaluation, such as EDU 511, Evaluation in Education; EDU 537, Evaluation in Secondary School.

Secondary Curriculum, such as EDU 532, Secondary School Education; EDU 536, Secondary School Problems and Methods; EDU 542, Seminar in Secondary School Curriculum; EDU 544, Middle School Curriculum; EDU 553, Curriculum Planning for the Urban Child; EDU 558, Seminar in Teaching the Disadvantaged Child.

Human Behavior, such as EDU 503, Educational Psychology; EDU 529, Adolescent Psychology; EDU 531, Systematic Study of Children and Youth; EDU 556, Group Dynamics in Education; EDU 630, Self Processes in Human Development and Education; EDU 685, Social Processes in Human Development and Education.

TOTAL REQUIREMENTS ..... 30

## EXCEPTIONAL CHILDREN EDUCATION

### Master of Science in Education

All Master's Degrees in the field of Exceptional Children Education at SUCB are the Master of Science in Education. In some instances the purpose of such a degree is to upgrade skills and to help candidates whose goal is to acquire certification. In other instances it is to provide

entry level programs for students from other fields. Requirements understandably vary for each option the student chooses with new entry students often having to take several prerequisite courses in addition to the thirty hour Master of Science degree. Degree programs include:

1. Communication Disorders
2. Learning and Behavioral Disorders
3. Mental Retardation
4. Physical Handicap

### ADMISSION PREREQUISITES

1. A baccalaureate or professional degree earned from an accredited college or university.
2. Prerequisite academic work which gives evidence that the applicant should be able to pursue effectively the courses in this program.
3. A cumulative average of 2.5 or better on a 4 point scale or a combined score of 1000 or better on the Aptitude portion of the Graduate Record Examination.
4. Letters of recommendation.
5. The Graduate Record Examination (Aptitude portion).

### ADVISEMENT

In view of the various options for Graduate Study provided in Exceptional Children Education it is imperative that students see assigned advisors in their respective programs. The initial contact for such advisement is the Chairperson of the Department. All students must have their program of study approved by an advisor.

### PRACTICA

Students majoring in these programs should expect a significant amount of their work to include practica assignments which link theoretical course work to internship settings. The College's laboratory facilities are augmented by area public schools, and by Meyer Memorial and Children's Hospitals, Roswell Park, Crippled Children's Guild, Psychiatric Center of Buffalo, West Seneca Institute for Retarded Children, The Niagara Frontier Vocational Center, Hearing and Speech Center at Buffalo Psychiatric Center, Methodist and Protestant Homes for Children and Baker Hall.

## COMMUNICATION DISORDERS

### Master of Science in Education

#### PROGRAM REQUIREMENTS



**Required Courses** ..... 18-21

By advisement from the following:

- EXE 517 Diagnostic Principles and Procedures
- EXE 559 Seminar in Stuttering: Theory and Research
- EXE 609 Seminar in Voice and Articulation
- EXE 611 Graduate Externship
- EXE 612 Neuropathologies of Speech
- EXE 617 Seminar in Cleft Palate
- EXE 621 Communication Problems of the Retarded
- EXE 622 Theoretical Aspects of Language Diagnosis and Therapy
- EXE 624 Seminar in Audiology

**Research** ..... 3-6

- EXE 690 Master's Project ..... 3
  - EDU 694 Research Methods and Techniques ..... 3
  - EXE 695 Master's Thesis ..... 6
- (Each candidate, after conference with his advisor, must select one of the above requirements.)

**Required Courses in Humanistic and Behavioral Foundations** ..... 3-9

By advisement from courses in Professional Studies or selected from Humanities and Social Sciences.

**TOTAL REQUIREMENTS** ..... 30

Note: Students with degrees in education and/or arts and sciences may schedule a thirty hour program in Communication Disorders, providing departmental undergraduate prerequisites have been satisfied. Students seeking certification should consult with a Program Advisor before first registration. All programs must be planned with an advisor and approved by Department Chairperson.

## LEARNING & BEHAVIORAL DISORDERS

### Master of Science in Education

#### PROGRAM REQUIREMENTS

**Required Courses** ..... 12-24

By advisement from the following:

- EXE 505 Survey of Specific Learning Disabilities
- EXE 508 Understanding the Problem Child in the Classroom
- EXE 509 The Gifted Child
- EXE 513 Assessing Exceptional Children
- EXE 525 Contingency Management in the Classroom
- EXE 527 Guidance of Children Who Are Exceptional
- EXE 540 Childhood Language Disabilities
- EXE 555 Children with Special Needs
- EXE 608 Person to Person Interaction for Clinical Teaching
- EXE 610 Expanding Self-Awareness for Effective Teaching
- EXE 613 Curriculum Planning for Clinical Teaching
- EDU 613 Diagnosis and Prescription for the Classroom Teacher
- EXE 615 Graduate Practicum for LBD Clinical Teaching
- EDU 628 Reading Diagnosis and Prescription: Theory
- EXE 630 Psychoeducational Clinical Practicum
- EDU 632 Reading Diagnosis and Prescription — Clinical Practicum

**Required Courses in Humanistic and**

**Behavioral Foundations** ..... 3-9

By advisement from courses in Professional Studies or selected from Humanities and Social Sciences.

**Research** ..... 3-6

- EXE 690 Master's Project ..... 3
  - EDU 694 Research Methods and Techniques ..... 3
  - EXE 695 Master's Thesis ..... 6
- (Each candidate, after conference with his advisor, must select one of the above requirements.)

**Electives** ..... 12-24

**MINIMUM REQUIREMENTS** ..... 30

Note: Students seeking certification should consult with a Program Advisor before first registration. All programs must be planned with an advisor and approved by Department Chairperson.



## MENTAL RETARDATION

### Master of Science in Education

#### PROGRAM REQUIREMENTS

##### Required Courses ..... 12-18

By advisement from the following:

- EXE 507 Secondary Work-Study Programs for the Mentally Retarded  
EXE 514 Curricular Concepts for the Educable Mentally Retarded  
EXE 520 Teaching the Trainable Retarded  
EXE 600 The Trainable Mentally Retarded: Trends, Problems and Issues  
EXE 601 Psychological and Social Aspects of Mental Retardation  
EXE 602 Administration and Supervision of Programs for Exceptional Children  
EXE 603 Internship in Mental Retardation/Physical Handicap  
EXE 605 Seminar in Mental Retardation  
EXE 606 Supervision of Student Teachers in Mental Retardation/Physical Handicap  
EXE 614 Prescriptive Teaching of the Mentally Retarded  
EXE 621 Communication Problems of the Mentally Retarded

- IAE 505 Creative Arts for Mentally Retarded

##### Elective Courses in other areas of Exceptionality ..... 3-12

- EXE 505 Survey of Specific Learning Disabilities  
EXE 508 Understanding the Problem Child in the Classroom  
EXE 509 The Gifted Child  
EXE 513 Assessing Exceptional Children  
EXE 516 Diagnostic Principles and Procedures in Speech Pathology  
EXE 525 Contingency Management in Classroom  
EXE 527 Guidance of Children Who Are Exceptional  
EXE 540 Childhood Language Disabilities  
EXE 555 Children With Special Needs  
EXE 610 Expanding Self Awareness for Effective Teaching

Credit  
Hours

#### Required Courses in Humanistic and

##### Behavioral Foundations ..... 3-9

By advisement from courses in Professional Studies or selected from Humanities and Social Sciences.

##### Research ..... 3-6

- EXE 690 Master's Project ..... 3  
EDU 694 Research Methods and Techniques ..... 3  
EXE 695 Master's Thesis ..... 6  
(Each candidate, after conference with his advisor, must select one of the above requirements.)

##### Electives ..... 0-6

##### TOTAL REQUIREMENTS ..... 30

Note: Students seeking certification should consult with a Program Advisor before first registration. All programs must be planned with an advisor and approved by Department Chairperson.

## PHYSICAL HANDICAP

### Master of Science in Education

#### PROGRAM REQUIREMENTS

##### Required Courses ..... 12-18

By advisement from the following:

- EXE 505 Survey of Specific Learning Disabilities  
EXE 513 Assessing Exceptional Children  
EXE 514 Curricular Concepts for Mentally Retarded  
EXE 527 Guidance of Children Who Are Exceptional  
EXE 555 Children With Special Needs  
EXE 600 The Trainable Mentally Retarded: Trends, Problems and Issues  
EXE 601 Psychological and Social Aspects of Mental Retardation  
EXE 602 Administration and Supervision of Programs for Exceptional Children  
EXE 603 Internship in Mental Retardation/Physical Handicap

Credit  
Hours



- EXE 604 Curriculum for the Physically Handicapped
- EXE 606 Supervision of Student Teachers in Mental Retardation/Physical Handicap
- EXE 614 Prescriptive Teaching of the Mentally Retarded
- EXE 621 Communication Problems of the Mentally Retarded

**Elective Courses in other areas of Exceptionality . . . . . 3-12**

- EXE 508 Understanding the Problem Child in the Classroom
- EXE 509 The Gifted Child
- EXE 516 Diagnostic Principles and Procedures in Speech Pathology
- EXE 520 Teaching the Trainable Retarded
- EXE 525 Contingency Management in Classroom
- EXE 540 Childhood Language Disabilities
- EXE 610 Expanding Self-Awareness for Effective Teaching
- EXE 621 Communications Problems of the Mentally Retarded

**Required Courses in Humanistic and Behavioral Foundations . . . . . 3-9**

By advisement from courses in Professional Studies or selected from Humanities and Social Sciences.

**Research . . . . . 3-6**

- EXE 690 Master's Project . . . . . 3
- EDU 694 Research Methods and Techniques . . . . . 3
- EXE 695 Master's Thesis . . . . . 6
- (Each candidate, after conference with his advisor, must select one of the above requirements.)

**Electives . . . . . 0-12**

**TOTAL REQUIREMENTS . . . . . 30**

*Note:* Students seeking certification should consult with a Program Advisor before first registration. All programs must be planned with an advisor and approved by Department Chairperson.

Credit  
Hours

## GENERAL SCIENCE

### Master of Science in Secondary Education

#### ADMISSION PREREQUISITES

Must include one year in each of the sciences and in mathematics.

#### PROGRAM REQUIREMENTS

Credit  
Hours

**Required Courses . . . . . 15**

15 semester hours are required in graduate science and mathematics courses selected by advisement.

**Science Education . . . . . 9**

- SCI 628 Seminar in Secondary Science Education . . . . . 3
- SCI 632 Curricular Trends in Teaching Science in the Secondary School . . . . . 3
- SCI 685 Evaluation in Science Education . . . . . 3

**Research . . . . . 3-6**

Each degree candidate, after a conference with his advisor, must select one of the following requirements:

- SCI 690 Master's Project . . . . . 3
- SCI 694 Research Methods & Techniques in Science Education . . . . . 3
- SCI 795 Master's Thesis . . . . . 6

**Unrestricted Electives . . . . . 0-3**

**TOTAL REQUIREMENTS . . . . . 30**



## GEOSCIENCES

### Master of Science in Secondary Education

#### ADMISSION PREREQUISITES ..... 36

Normally 36 hours in science and math, including at least 15 hours of geoscience, are required for admission to the department program of study. In special cases, individuals with deficiencies may be granted conditional admittance. All prerequisite deficiencies must be removed prior to Admission to Candidacy.

#### PROGRAM REQUIREMENTS ..... 30

1. 30 graduate semester hours selected by advisement and distributed as follows:
  - a. science and mathematics ..... 18
  - b. science education ..... 9
  - c. unrestricted elective ..... 3
2. A research component is required.
3. Demonstrated competencies in the areas listed below
  - a. Geosciences: historical geology, paleontology, geomorphology, astronomy, oceanography, mineralogy and petrology, meteorology
  - b. other sciences: biology, chemistry, physics
  - c. Science Education: evaluation, secondary curricula, behavioral psychology

The usual method of demonstrating competencies in the sciences is through successful completion of graduate or undergraduate courses in the areas listed. (Graduate credit is available only for courses listed as graduate.) The Department of Geosciences will provide its graduate majors with opportunities for non-credit instruction and competency examinations in the following areas: paleontology, geomorphology, mineralogy and petrology, historical geology, physical geology.

The usual method of demonstrating competencies in science education is successful completion of the following courses: SCI 685 Evaluation in Science Education, SCI 632 Curricular Trends in Science Teaching in the Secondary School, SCI 628 Seminar in Secondary Science Education.

The research component may be satisfied by successful completion of one of the following courses: SCI 694 Research Methods and Techniques in Science Education, GES 690 Master's Project, or GES 795 Research Thesis in Geosciences.

## HISTORY

### Master of Arts

#### ADMISSION PREREQUISITES

1. Bachelor's degree from accredited college or university.
2. Undergraduate cumulative average of 2.75 on 4.00 scale and average of 3.00 in history.
3. Acceptable scores on the Graduate Record Examination, including the advanced examination in history.
4. Thirty (30) semester hours in history.

If applicant does not meet these requirements, history department may grant conditional admission to the program. Such additional work or waiver of general prerequisites shall be set forth by the Graduate Committee at the time of acceptance for admission.

#### ADVISOR

The student, with the approval of the department chairperson or the Graduate Committee, will select from among the department members an advisor who specializes in his principal area of interest.

#### PROGRAM REQUIREMENTS

##### Language Requirement

Demonstrated competence in one foreign language (approved by Graduate Committee) through an examination to be arranged by the history department. This competency must be established prior to the completion of eighteen (18) semester hours. As an alternative to foreign language competence the student, with the approval of the Graduate Committee or the department chairperson, may choose to acquire or to demonstrate competence in either statistics or computer programming.

	Credit Hours
Required Courses .....	18

Courses to be chosen, under advisement, in American, European, or Third World history. Six (6) hours may be taken in related disciplines, such as political science, geography, English, with the expressed approval of the student's advisor.

Seminars .....	6
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Students must elect either History 700 or History 701. In addition, one other seminar (3 hours) must be taken. Students



must consult with advisor or department chairman in regard to the selection of the seminars.

### Examination

Comprehensive oral examination in two fields of history. The student's advisor, in consultation with the student, will schedule the comprehensive oral examination. The examination must be passed before the thesis is submitted.

### Thesis ..... 6

The student, in consultation with his advisor (first reader) and a second reader will prepare a written thesis. The thesis, after approval, must be submitted to the history department in three (3) bound copies.

TOTAL REQUIREMENTS ..... 30

## HOME ECONOMICS EDUCATION

### Master of Science in Education

#### Category I

#### ADMISSION PREREQUISITES

1. A bachelor's degree from an accredited college or university.
2. Provisional New York State certification for teaching home economics.
3. A 2.5 (on a 4 point scale) grade point average over the last sixty hours of undergraduate work or a combined quantitative/verbal score of 1,000 or better on the aptitude portion of the Graduate Record Examination

#### PROGRAM REQUIREMENTS

**Technical** ..... 12  
 Consumer Studies  
 Human Development, Family and Community Relations  
 Nutrition and Food Science

Credit  
Hours

Credit  
Hours

### Professional ..... 9

- HEE 521 Curriculum Planning in Home Economics (Required) ..... 3  
 HEE 607 Evaluation in Home Economics ..... 3

*PLUS One of the following:*

- HEE 501 Trends in Teaching Home Economics ..... 3  
 HEE 515 Home Economics Education for Adults ..... 3  
 HEE 602 Leadership in Home Economics Supervision ..... 3  
 HEE 617 Seminar: Role of the Urban Home Economist ..... 3

### Research ..... 3-6

- HEE 600 Seminar in Home Economics Education Research (Required) ..... 3  
 (Each candidate, after conference with his advisor, may elect to take HEE 690 or HEE 695 in addition to HEE 600. HEE 600 may serve as a basis for these.)  
 HEE 690 Master's Project ..... 3  
 HEE 695 Master's Thesis ..... 6

### Unrestricted Electives ..... 3-6

TOTAL REQUIREMENTS ..... 30

#### Category II

#### ADMISSION PREREQUISITES

1. A bachelor's degree from an accredited college or university.
2. A 2.5 (on a 4 point scale) grade point average over the last sixty hours of undergraduate work or a combined quantitative/verbal score of 1,000 or better on the aptitude portion of the Graduate Record Examination.

#### PROGRAM REQUIREMENTS

**Required Courses\*** ..... 36  
 NFS 101 Introductory Food ..... 3

\*Previous course work may be substituted by advisement. Upon successful completion of one block of student teaching, the second block may be waived, dependent upon previous degree and experience.



	Credit Hours
CON 230 Family Health and Home Nursing .....	3
NFS 308 Advanced Foods .....	3
NFS 335 Human Nutrition .....	3
CON 107 Introductory Clothing .....	3
CON 302 Household Equipment .....	3
CON 306 Textiles for the Consumer & Marketer .....	3
CON 307 Clothing — Design and Construction .....	3
CON 402 Management and Family Finance .....	3
HDF 109 Human Development and Family Relations—The Adolescent Years through Young Adulthood .....	3
<b>Professional Education .....</b>	<b>12</b>
HEE 317 Dimensions in Home Economics .....	3
EDU 303 Educational Psychology .....	3
HEE 460 Professional Semester .....	6
<b>Student Teaching .....</b>	<b>9</b>
HEE 461, 462 Student Teaching* .....	9
<b>Master's Degree Program .....</b>	<b>30</b>
Requirements as outlined in Category I	
<b>TOTAL REQUIREMENTS .....</b>	<b>87</b>

## INDUSTRIAL ARTS EDUCATION

### Master of Science in Education

The graduate program in Industrial Arts Education is designed to develop, extend and enhance the technological and professional competencies of graduate students and teachers in Industrial Arts, as well as to provide a base for the student to move toward advanced study in

education. Completion of the program provides the Master of Science in Education degree and satisfies the requirements for permanent certification in New York State.

### ADMISSION PREREQUISITES

1. A bachelor's degree from an accredited college or university, with undergraduate major in Industrial Arts Education  
or  
Baccalaureate from an accredited college or university with provisional certification in Industrial Arts teaching.
2. Grade point average of 2.5 or better in Upper Division (last 60 hours) and an undergraduate cumulative average of 2.3 or better  
or  
A score of 1,000 or better on the Graduate Record Examination.
3. Written acceptance by the Chairperson, Industrial Arts and Vocational Education Department.

### PROGRAM REQUIREMENTS

	Credit Hours
<b>Professional Education: (Required) .....</b>	<b>15-18</b>
IAE 600 Foundations of Industrial Arts .....	3
IAE 601 Research Seminar in Industrial Arts .....	3
IAE 628 Curriculum Development in Industrial Arts .....	3
IAE 634 Evaluation in Industrial Arts .....	3
plus	
IAE 690 Master's Project .....	3
or IAE 695 Thesis .....	6
<b>Electives .....</b>	<b>12-15</b>
Subject to Student's Advisor and Advisory Committee Ap- proval	
<b>TOTAL REQUIREMENTS .....</b>	<b>30</b>

*Note:* Program variances must be approved by the Student's Advisor, the Program Approval Committee, and the Department Chairperson. At least fifty percent of the degree course work must be in Industrial Arts Education.

### Technical Education Electives:

IAE 513, 520, 590, 608, 612, 613, 615, 617, 618, 620, 621, 623, 629, 630.



## MATHEMATICS

### Master of Arts

#### ADMISSION PREREQUISITES

1. Bachelor's degree from accredited college or university.
2. Completion of at least 24 semester hours of undergraduate mathematics beyond calculus, including a full year of algebra (our present MAT 301, 302); a semester of analysis (our present MAT 417); and at least one semester of geometry or topology (our present MAT 322 or 471).
3. An average of 2.5 or better on a 4.00 point grading scale in undergraduate mathematics.
4. Written acceptance as a graduate student in the M.A. program by the Graduate Faculty of the Mathematics Department and the Dean of Graduate Studies.
5. A student deficient in item 2 above may remove the deficiency while pursuing graduate study. This can be done only upon a written statement from the student's advisor or the Graduate Faculty of the Mathematics Department. The statement will indicate what deficiency is to be removed and specifically how.

#### PROGRAM REQUIREMENTS

The student must complete successfully the requirements listed in (a) and either (b) or (c).

- a. A student must complete:  
MAT 701 Modern Algebra I  
MAT 702 Modern Algebra II  
MAT 711 Analysis I  
MAT 712 Analysis II  
MAT 771 Topology
- b. Thirty semester hours of graduate mathematics (600 or 700 level) and a comprehensive examination in mathematics based solely on the required courses. A student may elect up to 6 semester hours of graduate work in related fields in lieu of the same number of semester hours of mathematics upon the written approval of his advisor.
- c. Twenty-four hours of graduate mathematics, a thesis in mathematics for 6 semester hours and a comprehensive examination based solely on the required courses.

## MATHEMATICS

### Master of Science in Secondary Education

#### ADMISSION PREREQUISITES

1. Completion of at least 18 semester hours of undergraduate mathematics beyond calculus, including one semester of algebra (our present MAT 301, 202), a semester of analysis (our present MAT 417), at least one semester of geometry (our present MAT 322, 329), and at least one semester of probability statistics, topology or applied mathematics (our present MAT 381, 382 or 471.)
2. An average of 2.3 on a 4.0 scale in all undergraduate mathematics course.
3. Acceptance as a graduate student by the Chairperson of the Graduate Faculty of the Mathematics Department and the Dean of Graduate Studies.
4. A limited deficiency in item 1 above may be removed while pursuing graduate study with a written statement from the student's advisor or the Chairperson of the Graduate Faculty of the Mathematics Department. A copy of this statement will be filed in the Mathematics Office and with the Graduate Office. A student with a deficiency in item 2 above may be asked to take the Advanced Mathematics Section of the Graduate Record Examination as a possible alternate to this requirement.

Courses taken to remove a prerequisite deficiency will carry graduate credit only if approved by the Graduate Faculty.

#### PROGRAM REQUIREMENTS

The student must complete at least 30 semester hours of course work from the following three categories. Unrestricted electives are not permitted.

	Credit Hours
<b>Mathematics</b> .....	<b>15-21</b>

The student must complete at least 15 semester hours of mathematics at the 600 or 700 level. This course work must include:

MAT 701 Modern Algebra I  
MAT 711 Analysis I

At least two of the following courses:

MAT 620 Modern Geometry: Selected Topics  
MAT 631 Foundations of Mathematics



- MAT 651 Number Theory  
 MAT 683 Statistical Theory  
 MAT 696 History of Mathematics

Credit  
Hours

A 2.7 average is required for all graduate mathematics courses taken at this campus.

### Research Experience ..... 3-6

Required of all students. Each candidate, after conference with his advisor, must select at least one of the following:

- MED 595 Research Methods & Techniques in  
 Mathematics Education ..... 3  
 MED 690 Project in Mathematics  
 Education ..... 1-4  
 MED 795 Thesis in Mathematics Education ..... 6

### Mathematics Education ..... 6-12

The student must complete at least six (6) semester hours of graduate mathematics education courses selected by advisement from the following list. Up to six (6) semester hours of electives pertaining to the professional development of a teacher may be chosen with prior approval of the Mathematics Education Graduate Committee.

- MED 594 Workshop  
 MED 596 Conference  
 MED 598 Microcourse  
 MED 600 Contemporary Mathematics  
 Curriculum Developments  
 MED 601 Seminar in Teaching of Mathematics  
 MED 602 Selected Topics in Mathematics for  
 Secondary Teachers

A 3.0 average is required for all graduate mathematics education courses.

(Graduate students may include no more than six (6) hours of credit for workshops, conferences and microcourses in a master's program).

### TOTAL REQUIREMENTS ..... 30

The 500 level courses are, in general, for students in elementary or exceptional children education or electives.

All 600 level courses and 700 level courses are, in general, designed for students earning degrees in mathematics or science or students with a concentration in mathematics. (See prerequisites for each course with course descriptions.)

## PHYSICS

### Master of Arts

#### ADMISSION PREREQUISITES

1. A bachelor's degree, or its equivalent, from an accredited college or university.
2. A minimum of forty-eight semester hours of course work in science and mathematics. Applicants showing deficiency in this requirement may be accepted with probationary status until deficiencies are removed.
3. A minimum undergraduate cumulative average of 2.50 on a 4.00 point scale.
4. A minimum average of 3.00 on undergraduate physics courses completed. Subject to the approval of the Physics Graduate Faculty and the Dean of Graduate Studies, applicants who do not meet this requirement may be permitted to prove their acceptability by successful performance in graduate physics courses at this college.
5. Acceptable scores on both the general aptitude test and the advanced physics test of the Graduate Record Examination.

#### PROGRAM REQUIREMENTS

1. Completion of at least 30 semester hours of graduate credit with a cumulative average of 3.00 on a 4.00 point scale. This credit may include at most nine credits of C work and no credits of D work.
2. Option with Thesis.
  - (a) The candidate's required 30 credits must include the following:
 

	Credit Hours
PHY 616 Advanced Dynamics .....	3
PHY 618 Advanced Electricity & Magnetism I .....	3
PHY 606 Advanced Quantum Theory I .....	3
  - (b) The candidate's 30 credits must include an additional nine credits in such formal course work as is approved by the Physics Graduate Faculty.
  - (c) The candidate's 30 credits must include a successfully-completed thesis.
  - (d) The candidate must successfully defend his thesis before a committee of three members of the Physics Graduate Faculty.
3. Option without Thesis: Temporarily discontinued.



## PHYSICS

### Master of Science in Secondary Education

	Credit Hours
<b>ADMISSION PREREQUISITES</b> .....	<b>48</b>
Major Area of Specialization .....	24
Also required, one year in each of the other sciences and Differential and Integral Calculus.	

### PROGRAM REQUIREMENTS

<b>Required Courses in Content</b> .....	<b>12-15</b>
15 semester hours are required in graduate science and mathematics courses selected by advisement.	
<b>Science Education Component Courses</b> .....	<b>9</b>
SCI 628 Seminar in Secondary Science Education .....	3
SCI 632 Curriculum Trends in Science Teaching in the Secondary School .....	3
SCI 685 Evaluation in Science Education .....	3
<b>Research Component</b> .....	<b>3-6</b>
SCI 694 Research Methods and Techniques in Science Education .....	3
or	
PHY 690 Research Project in Physics .....	3
or	
PHY 795 Research Thesis in Physics .....	6
<b>Unrestricted Electives</b> .....	<b>3</b>
<b>TOTAL REQUIREMENTS</b> .....	<b>30</b>

## SCHOOL ADMINISTRATION & SUPERVISION

### Certificate of Advanced Study

The Program is open to potential administrators (principals, supervisors, and supporting staff) and consists of Fundamentals of Administration, courses in administration and supervision selected under advisement, and the internship and internship seminar experiences. Major emphases are placed on programmatic considerations, in-

stitutional and field experiences, and individualization to meet the students' goals. These opportunities contribute to the development of professional administrators who possess the expertise necessary to serve public education in our current period of rapid, stressful, and complex change.

Students with a reading background at the M.S.Ed. level can plan programs under advisement that meet N.Y. State requirements for administration and supervisory credentials and the requirements recommended by the I.R.A. for the Reading Consultant and the Reading Supervisor.

Students completing the program, in addition to receiving the Certificate, exceed New York State requirements and are recommended for permanent certification as School Administrator and Supervisor.

### ADMISSION PREREQUISITES

1. A master's degree or thirty hours of approved study beyond the baccalaureate degree.
2. Provisional certification for teaching.
3. Two years of teaching experience.
4. Successful scores on the Graduate Record Examination and the Miller Analogies Test.
5. An interview.

Application for conditional entrance into the program may be made at or after the completion of the baccalaureate degree. Early application is desirable so that individual advisement, an integral feature of the program, can begin as soon as possible. Included are 30 credit hours toward a master's degree, followed by 30 hours of administrative/supervisory experiences.

### PROGRAM REQUIREMENTS

	Credit Hours
<b>Required courses</b> .....	<b>9-12</b>
EDU 701 Fundamentals of Administration I .....	6
EDU 703 Internship in Administration .....	3
EDU 704 Seminar in Administration .....	3

### Specialty courses (under advisement) .....

Appropriate courses will be selected under advisement from the areas of Supervision, Principalship, Instructional Leadership, Community Relations, Curriculum Design, Legal Problems, Business Management and Finance, Personnel Development and Facilities Planning.

**TOTAL REQUIREMENTS** ..... **30**



## SOCIAL STUDIES EDUCATION

### Master of Science in Education

The graduate program leading to the degree of Master of Science in Secondary Education with a major in Social Studies is designed to help candidates become educational leaders and innovative change agents as they acquire permanent teaching certification (7-12).

#### ADMISSION PREREQUISITES

Each applicant shall have met all the admission requirements set by the Graduate Office and the following:

1. Bachelor's degree earned from an accredited college or university.
2. Thirty-six semester hours in History and/or the Social Sciences.
3. Be eligible for New York State Provisional Teacher Certification (or approved equivalent).
4. An interview with the department chairman may be required.

#### ADVISEMENT

Each student is assigned an advisor, and it is imperative that students regularly consult with their advisors. All students must have their program of study approved by their advisor and the department chairman.

#### PROGRAM REQUIREMENTS

##### Required Courses

History and/or Social Science ..... 15

The student must complete 15 semester hours in history and/or the social sciences. This course work is to be selected with advisor approval, and a minimum of 9 semester hours must be concentrated in a single discipline.

Professional Education ..... 15

SSE 513 Seminar in Secondary Social  
Studies ..... 3  
SSE 595 Research Methods in Secondary  
Social Studies ..... 3

If the student elects not to write a thesis, the student must complete the following 9 semester hours with advisor approval:

Credit  
Hours

Credit  
Hours

SSE 730 Practicum: Innovations in the  
Social Studies ..... 3  
Social Studies Education Elective ..... 3  
Professional Education Elective ..... 3

If the student elects to write a thesis, the student must complete the following 9 semester hours:

SSE 730 Practicum: Innovations in the  
Social Studies ..... 3  
SSE 795 Thesis ..... 6

TOTAL REQUIREMENTS ..... 30

Note: At least 15 semester hours course work must be completed in 600 or 700 level courses.

## STUDENT PERSONNEL SERVICES

### Master of Science in Education

The program in College Student Personnel Services is designed primarily for individuals who wish to work with students in a college or university setting. Included in the program will be an overview of the college and university community; the program will also be concerned with the responsibilities of the offices involved with admissions, residence halls, financial aids, registration, international student activities, counseling, college-union activities, placement and the administration of student affairs programs. The program also has relevance for those who wish to work in a variety of community agencies and special programs especially those involving young adults who now have or may have an interest in attending a college or university.

#### ADMISSION PREREQUISITES

1. A baccalaureate or professional degree earned from an accredited college or university.
2. Prerequisite academic work which gives evidence that the applicant should be able to pursue effectively the courses in this program.



The usual prerequisites include 24 semester hours distributed among courses in Sociology or Anthropology, Psychology or Growth and Development, Measurements or Statistics, Philosophy of Education or Problems in Education. There are, of course, substitutions by advisement.

3. A cumulative average of 2.75 or better on a 4 point scale or a combined score of 1,000 or better on the Aptitude portion of the Graduate Record Examination.
4. Three letters of recommendation.
5. The Graduate Record Examination (General Aptitude Test).
6. Submission of a career goals and interest statement along with an indication of the reasons for interest in the field of Student Personnel Services.

### PROGRAM REQUIREMENTS

	Credit Hours
<b>Required Courses</b> .....	27
EDU 616 Problems and Practices in Higher Education .....	3
EDU 617 Seminar on The American College Student .....	3
EDU 618 Seminar on Student Personnel Services .....	3
EDU 622 Techniques of Counseling .....	3
EDU 623 Advanced Techniques of Counseling .....	3
EDU 624-625 Internship in Student Personnel Services .....	6
EDU 694 Research Methods and Techniques .....	3
EDU 690 Master's Project .....	3
<b>Electives</b> .....	9
Appropriate courses in Sociology, Education, Anthropology, Psychology and Statistics will be included as electives with the approval of the coordinator of the Student Personnel Program.	
<b>TOTAL REQUIREMENTS</b> .....	36

### FINANCIAL ASSISTANCE

There are a limited number of assistantships available. Recipients receive room stipend and waiver of tuition.

## VOCATIONAL TECHNICAL EDUCATION

### Master of Science in Education

The program in Vocational Technical Education was developed to extend and improve the professional competencies of occupational teachers. Candidates interested in becoming certified as Coordinators of Diversified Cooperative Work-Study Programs may take the two required courses for that purpose, VTE 550 and 555. Admission to the course requires a provisional teaching certificate in an occupational subject or industrial arts. Prior to admission, all candidates must complete the career goals form which is available at the Department office.

### ADVISEMENT

The candidate will be assigned or may select an advisor and together they will plan a program based on individual needs and the degree requirements. All courses should be selected by advisement.

### PROGRAM REQUIREMENTS

	Credit Hours
<b>Professional Studies</b> .....	15
VTE 530 Career Education: Rationale, Nature and Concepts	
VTE 536 Contemporary Methodology	
VTE 600 Contemporary Issues in Occupational Education	
VTE 601 Supervision of Vocational Education	
VTE 602 Administration of Vocational Education	
VTE 603 Selected Topics in the Organization, Administration and Supervision of Vocational Technical Education	
VTE 605 Occupational Guidance for Career Exploration	
VTE 606 History and Philosophy of Occupational Education	
VTE 620 Structure of Occupational Programs	
VTE 625 Interrelationships of Labor, Management and Occupational Education	
VTE 635 Curriculum Problems of Vocational Schools	
VTE 640 Testing and Measurement in Vocational Technical Education	
VTE 550 Organization of Diversified Cooperative Work-Study Programs	
VTE 555 Operation of Diversified Cooperative Work-Study Programs	



<b>Research</b> .....	<b>Credit Hours</b> 3-6
VTE 690 Master's Project	
VTE 694 Research in Vocational Technical Education (Required)	
<b>Technical</b> .....	0-6
VTE 604 Technical Project	
Courses or internship program; these may be offered here or at other institutions	
<b>Electives</b> .....	3-12
(Outside of VTE courses and by advisement)	
<b>TOTAL REQUIREMENTS</b> .....	30

## Courses of Instruction

### Explanation of Listing

Individual courses are described in alphabetical order by content on the following pages. Within each grouping, they are listed in numerical sequence. The department responsible for each grouping is listed under each content heading, along with its chairperson and office location.

### COURSE NUMBERING SYSTEM

Courses in the series 101-499 are not listed in this bulletin because they are undergraduate and yield no graduate credit. A student may register for or audit these courses in order to make up deficiencies or fill gaps in his earlier preparation, but not to meet the requirements of an advanced degree.

- 500-599 Open to all graduate students
- 600-699\* Open to degree and post-masters students only, generally limited to majors and others with specific preparation.
- 700-799\* Advanced courses requiring greater preparation, open only to degree and post-masters students

\*At least 15 credit hours of course work at the 600 and/or 700 level are required in all degree programs.

## ART EDUCATION

Offered by the Department of Art Education  
DR. VINCENT C. ARNONE, Chairperson  
Room 150 Bishop Hall

### AED 500 Art in the Elementary School

The use of art materials, processes, and procedures in the elementary school; individual experience in various media appropriate at different grade levels; consideration of the role of the classroom teacher in self-contained, supervised, or art specialist programs; related problems of the school curriculum.

### AED 501 Art Development in the Pre-School Child

The intellectual, emotional, physical, perceptual, and creative development of the young child from birth through the kindergarten; roles of parent and teacher in the creative growth of the child; implications for the choice of materials, processes and procedures appropriate at the pre-school level.

### AED 510 Art Materials Workshop

Studio experiences with various materials for art and classroom learning activities such as crafts, fibers, sculpture, graphics, painting, etc., extra class studio hours as needed. Elective for Art, Elementary, Secondary, Home Economics, Exceptional Education majors.

### AED 520 Art and Therapy

A study of the art experiences/products of children and adults in therapeutic settings through the use of slide lectures, demonstrations, films, video tapes, articles, books, observations, and group experiences.

### AED 602 Research Workshop in Art Education

Individual and group research in problems of art education; reports and discussions of current research activity in art education; techniques of research as applied to unique problems in art education and in evaluating the effects of unlike influences upon unlike individuals; extra class research problems. Required of all Art Education majors.

### AED 605 Seminar in Art Education

Problems in teaching and supervising art in various types of communities and schools; contemporary philosophy, psychology, principles and practices in art and education; relationship of current research to programs and procedures for the teacher and sponsor; extra class reports, progress pilot, research project, and seminar discussions. Required of all Art Education majors.

### AED 690 Master's Project

A study undertaken by one or more individuals on a problem of special



interest; aimed at making a special contribution to art education, as contrasted with normal class activity; may be presented, in part, as an exhibit of materials collected or prepared — including a major exhibit of art work related to study — with theories and findings reported in an acceptable form according to directions given by the Graduate Office. Art Education majors only.

#### **AED 695 Master's Thesis**

An individual investigation of an original problem to be submitted in typewritten form according to directions given by the Graduate Office; representing a significant contribution to the literature of art or art education, acceptable to the student's advisor and chairman of the appropriate area of specialization. *Prerequisite:* AED 602.

### **BIOLOGY**

Offered by the Department of Biology  
DR. JAMES D. HAYNES, Chairperson  
Room 313 New Science Building

#### **BIO 521 General Ecology**

The physical environment and its effects on the living organism; plant-animal relationships; interspecific and intraspecific relationships; problems in human ecology. Offered for graduate students with limited backgrounds in biology. *Prerequisite:* General Biology or its equivalent, or permission of instructor. *Special Note:* Not open to Biology Majors or those with a degree in biology.

#### **BIO 522 Human Genetics**

Biological basis of human genetics; study of the incidence, nature, and understanding of various genetic conditions. *Prerequisite:* None. *Special Note:* Not open to Biology Majors or those with a degree in biology.

#### **BIO 523 Basic Human Anatomy and Physiology**

Study of basic anatomy and physiology of cells, tissues, and organ systems of the human body. One two hour lecture and one two hour laboratory per week. *Prerequisite:* None. *Special Note:* Not available for credit toward M.A. in Biology.

#### **BIO 524 Problems in Environmental Biology**

Dynamics of population growth; the nature of environmental deterioration; possible solutions for achieving quality environment and human life. The role of community agencies and organizations. Field trips may be required. *Prerequisite:* Six (6) credit hours of biology or physical science. *Special Note:* Not open to Biology Majors or those with a degree in biology.

#### **BIO 525 Man and Evolution**

A study of man; his evolutionary history and position in the animal kingdom. *Prerequisite:* None. *Special Note:* Not open to Biology Majors or those with a degree in biology.

#### **BIO 526 Field Techniques in Biology**

Field identification, measurement techniques, collection, preservation, growth, reproduction, movement, habitats, food habits and distribution of organisms. Two one hour lectures, one two hour laboratory per week. Field trips required. *Prerequisite:* BIO 100 or 104 or their equivalent. *Special Note:* Not open to Biology Majors or those with a degree in biology.

#### **BIO 527 Field Studies in the Conservation of Natural Resources**

Problems of the renewable resources, treated as applied ecology in connection with soil, water, air forests and wildlife including population and food problems. Field instructions and lectures by experts from the State Conservation Department, federal bureaus, and local community organizations; techniques in conservation education. *Prerequisite:* BIO 100 or 104 or their equivalent. *Special Note:* Not open to Biology Majors or those with a degree in biology.

#### **BIO 604 Morphogenesis in Vascular Plants**

A study of the structural anatomy and morphogenesis of the vascular plants, with special emphasis on the angiosperms. Two one-hour lectures, one three-hour laboratory per week. *Prerequisite:* General Botany.

#### **BIO 605 Mycology**

Study of the taxonomy, morphology, reproduction, physiology, ecology, and economic importance of selected groups of fungi. *Prerequisite:* General Botany or equivalent. *Credit:* Four (4) semester hours. Six hours per week including laboratory.

#### **BIO 607 Biometrics II**

Analysis of variance with emphasis on experimental design. Analysis of covariance, bioassay, and non-parametric methods. Class discussions of M.A. Thesis proposals. Two hours of lecture and two hours of laboratory per week. *Prerequisite:* Biometrics or equivalent.

#### **BIO 608 Molecular Genetics**

Molecular basis for genetic analysis; a study of currently accepted models for DNA self-replication, RNA and protein synthesis, genetic coding and mutation. *Prerequisite:* General Genetics and Organic Chemistry.

#### **BIO 610 Protozoology**

Morphology, physiology, and taxonomy of the protozoa; life cycles of selected free-living and parasitic species; importance in environmental



interrelationships and significance in human problems. Four hours per week, including laboratory. *Prerequisite:* 18 semester hours in the biological sciences.

#### **BIO 612 Topics in Ecology**

Lectures, seminars, and laboratory and field study relating to a currently important topic in ecology. Topics will be announced in advance. Laboratory or field study may be required. May be taken more than once since different topics will be offered. *Prerequisite:* One semester each of ecology and biometrics or the equivalent.

#### **BIO 613 Enzymology**

Fundamentals of enzymology. The molecular structure, chemistry and mechanism of action of enzymes. *Prerequisite:* A course in Molecular Biology or Biochemistry.

#### **BIO 614 Taxonomy of Vascular Plants**

Principles and techniques of vascular plant identification and classification. Major emphasis on plant families of Northeastern United States and adjacent Canada. Five hours per week including laboratory or field trip. *Prerequisite:* Genetics, Physiology and Ecology.

#### **BIO 615 Advanced Bacteriology**

Study of the various groups of bacteria, particularly those common in nature and affecting the health and welfare of man. Four hours per week including laboratory. *Prerequisite:* 12 semester hours in biological sciences, including Microbiology, General Chemistry.

#### **BIO 616 Topics in Animal Physiology**

Special topics in animal physiology. Four hours per week. *Prerequisites:* General Physics, Organic Chemistry, one year of physiology. *Special Note:* May be taken more than once since different topics will be offered.

#### **BIO 617 Research Seminar**

Presentations and discussions of current research projects by graduate students in biology. Each participant will present a seminar on his research. The seminar will meet for a total of 15 hours per semester, the times of the meetings to be arranged. *Special Note:* Required of all M.A. students. Not open to M.S. students except by permission of the instructor.

#### **BIO 618 Ethology**

Causation, function, and biological significance of instinctive behavior and learning in animals, and their application to ecology and evolution. Three hours per week. *Prerequisite:* Three hours of psychology.

#### **BIO 619 Plant Ecology**

Trophic relations of plant communities in ecosystems, environmental factors influencing vegetation, theory and practice of sampling and

analyzing data, and interpretation of the dynamics of pattern, distribution, and sequential development of plant communities. Two one-hour lectures and one three-hour laboratory or field session per week. Additional all-day field trips may be required. *Prerequisite:* A course in biometrics or statistics and a course in taxonomy of vascular plants.

#### **BIO 620 Symbiology**

The interactions of symbiotes at various levels and the physiologic, ecologic and genetic factors which influence these interactions. *Prerequisite:* A course in biometrics or statistics and a course in taxonomy of vascular plants.

#### **BIO 625 Physical Ecology**

Interaction of plants and animals with physical factors in their environment. Role of radiation, convection, evaporation and conduction in the energy exchange of organisms. Mathematical modeling of the microclimate of plants and animals. Response of organisms to temperature, water and light. Three hours of lecture and three hours of laboratory. *Prerequisite:* One semester of ecology and one year of college physics or permission of instructor.

#### **BIO 626 Topics in Botany**

Lecture and discussion related to a specific topic in botany. Topic will be announced before registration for the semester. *Special Note:* May be taken more than once since different topics will be offered. *Prerequisite:* Nine hours of botanically oriented courses.

#### **BIO 627 Topics in Zoology**

Lecture and discussion related to a specific topic in zoology. Topic will be announced before registration for the semester. *Special Note:* May be taken more than once since different topics will be offered. *Prerequisite:* Nine hours of zoologically oriented courses.

#### **BIO 665 Algology**

Taxonomy, ecology, morphology, ultrastructure, physiology, and economic importance of selected species of freshwater algae. Four hours per week including laboratory. Saturday field trips may be required. *Prerequisite:* Ecology, or the equivalent.

#### **BIO 690 Master's Project**

A project undertaken by one or more individuals on a problem of special interest; to be planned and carried out with consultation and advisement from instructor. Applicable toward M.S. Ed. or M.A. degree.

#### **BIO 695 Research Thesis in Biology**

An individual investigation of an original problem to be submitted in typewritten form according to directions given by the Graduate Office.



## CHEMISTRY

Offered by the Department of Chemistry  
DR. JOSEPH S. ZINGARO, Chairperson  
Room 313 New Science Building

### CHE 500 Chemistry: Its History, Philosophy and Role in Society

The historical development of chemistry as a science and an aspect of culture; its philosophy, its technological role in society. *Prerequisite:* One year of college chemistry.

### CHE 505 Chemistry for Elementary Teachers

A discussion of general chemistry in line with the suggested State Education Department syllabus for grades K through 9; practice and performance of chemical demonstrations.

### CHE 510 Special Topics in Inorganic Chemistry

One of the following courses will be presented: Coordination chemistry; nonaqueous solvents; the representative elements and the lanthanides; synthetic inorganic chemistry. These topics are essentially independent of each other and the student may enroll more than once provided he has not received prior credit in this course for the same topics. *Prerequisite:* CHE 400 or the equivalent.

### CHE 535 Special Topics in Organic Chemistry

Advanced topics of a reasonably broad nature will be discussed in some detail with emphasis on the current state of our knowledge. These topics are essentially independent of each other and the student may enroll for this course as often as possible provided that he has not received credit in this course for the same topic. *Prerequisite:* CHE 202 or the equivalent.

### CHE 604 Graduate Chemistry Seminar

Oral presentation and analysis of current research from all areas of chemistry. *Prerequisite:* Permission of the instructor. *Credit:* One semester hour.

### CHE 605 Kinetics and Reaction Mechanisms

A study of the methods of determining mechanisms of chemical processes. *Prerequisite:* CHEM 306 or equivalent.

### CHE 607 Chemical Thermodynamics

Theory of chemical thermodynamics with particular emphasis on measurable properties, solution and phase equilibria, phase equilibria in the critical region, transport phenomena, statistical thermodynamics, and the application of these principles to chemical problems. *Prerequisite:* CHE 306 or the equivalent.

### CHE 625 Structure Analysis I: Spectroscopic Methods

A study of the absorption and emission of electro-magnetic radiation. *Prerequisite:* CHE 306 or the equivalent.

### CHE 626 Structure Analysis II: Non-Spectroscopic Methods

Use of non-spectroscopic physical methods such as x-ray crystallography, polarimetry, and mass spectrometry to elucidate the structures of compounds. *Prerequisite:* CHE 306 or the equivalent.

### CHE 642 Biochemistry II

Selected topics in biochemistry (e.g. bioenergetics, cellular controls, intermediary metabolism, origin of life, feedback, chemical genetics). *Prerequisite:* CHE 401 or the equivalent.

### CHE 660 Advanced Laboratory Techniques

Individualized laboratory technique instruction to prepare students for graduate research. *Prerequisite:* CHE 403 or the equivalent. *Credit:* Three semester hours; one 1-hour lecture and two 3-hour laboratory periods.

### CHE 690 Master's Project

A study undertaken by one or more individuals on a problem of special interest; must be submitted in acceptable form according to directions given by the Department of Chemistry.

### CHE 795 Research Thesis in Chemistry

An individual investigation of an original problem to be submitted in typewritten form according to directions given by the Department of Chemistry.

## COMMUNITY/SOCIAL SERVICES

Offered by the Department of Community/  
Social Services & Criminal Justice  
EDWARD L. MORGAN, Chairperson  
Room 207-B New Classroom Building

### HDF 502 Personality Development in the Family

Study of personality development emphasizing the role of the family in shaping the individual from infancy through adulthood; contributions of recent research in personality, child development, family relations.

### HDF 504 Trends in Early Childhood Programs

Consideration of the needs of families for quality child development programs in light of recent research on cognition and socialization during infancy and early childhood. Emphasis is placed on program development and techniques for parent involvement in child development centers.



### **HDF 511 Resources for Teaching Family Relations**

Techniques and media for teaching family relationships; examination and evaluation of materials for teaching at various levels. *Prerequisite or concomitant:* functional course in family relations.

## **CONSUMER STUDIES**

Offered by the Department of Consumer Studies  
& Home Economics

DORRIS M. CLOSS, Interim Chairperson  
Room 206 Caudell Hall

### **CST 525 Clothing Design Through Draping**

Experience with the manipulative of a two dimensional fabric to cover three dimensional forms, mobile and immobile, using a variety of fabrics to achieve individualized design. *Prerequisite:* CST 306, 307, 427 or equivalent.

### **CST 526 Textile Marketing**

Marketing applications to the textile industry with emphasis on international trade and consumerism. *Prerequisite:* HEE 600.

### **CST 534 Selected Topics in Consumer and Business Studies**

Review and synthesis of current content in Business, Consumer, Product Knowledge and Distributive and Business Education Studies.

### **CST 608 Clothing Design**

Draping and flat pattern with emphasis on couturiere techniques. *Prerequisite:* CST 306, 307, 427, 525 or equivalent.

### **CST 610 Trends in Housing and Home Furnishings**

Problems related to housing and home furnishings; planning and construction; consultants, field trips.

### **CST 617 Recent Trends in Clothing**

Interpretation, use and evaluation of present trends in teaching clothing construction; emphasis on techniques and the importance of management in the use of time, money, energy and equipment.

### **CST 620 Family Financial Planning**

Consideration of family financial problems; alternate choices in the light of family goals and values; examination and evaluation of available materials for use in teaching. *Prerequisite:* HEE 600 or equivalent.

### **CST 627 Comparative Methods in Clothing Construction**

Experimental techniques in the manipulation of fabric by considering fiber, weave, finish, hand, and design; qualitative analysis of the results, use of time and effort. *Prerequisite:* CST 306, 307 or equivalent.

## **CREATIVE STUDIES**

Offered by the Creative Studies Program  
DR. SIDNEY J. PARNES, Coordinator  
Room 217 Chase Hall

### **CRS 559 Workshop in Nurturing Creative Behavior**

The program is designed to bring to the participants the latest research findings and developments in the study of creative behavior, and to help enable them to translate these findings into educational or managerial practice. Participants receive instruction based upon a program that has been used since 1955 at the Annual Creative Problem-Solving Institutes in Buffalo. Individuals, alone and in sub-groups, work intensively on projects of direct concern to their educational or managerial efforts.

### **CRS 560 Seminar in Creative Studies**

This program is designed to extend participants' understanding and application of the total body of supporting literature in the field of Creative Studies. In addition to classroom experiences in the Seminar, each participant has access to a unique, comprehensive reference center of books, theses, articles, films, tapes, etc. on creativity. *Prerequisite:* Workshop described above, or Creative Problem-Solving Institute or equivalent.

### **CRS 570 Creative Problem-Solving Institute (1 credit)**

Week-long workshop-type program introducing the student to principles and procedures of creative problem-solving. Open only to enrollees of the Creative Education Foundation's Creative Problem-Solving Institute. Only S or U grades given.

### **CRS 610 Nurturing Creative Behavior**

An investigation of problems encountered in cultivating creative behavior in instructional programs. A critique of the literature on creativity, including the history of man's thought about creativity, various theories of creativity, empirical research, and various procedures which have been developed for nurturing creative talent.

### **CRS 615 Master's Seminar**

An in-depth analysis of processes of synectics and creative analysis related to Creative Studies. Further critique of literature on creativity. Discussion of creative problem-solving in relation to other disciplines such as education, psychology, sociology, history, philosophy, the arts, and sciences.

### **CRS 625 Advanced Creative Problem-Solving Institute**

Individualized programs tailored to meet each student's specific needs, educational background, thesis problem, goals, etc., selected with ad-



visement from some 100 diverse interdisciplinary offerings in advanced programs of the Institute.

**CRS 670 Team-Teaching I**

Team-teaching experience in first of the Creative Studies semester courses, under direct supervision of the faculty.

**CRS 680 Team-Teaching II**

Team-teaching experience in second of the Creative Studies semester courses, under direct supervision of the faculty.

**CRS 690 Master's Project**

One of the following areas to be selected: (1) Creative program and curriculum development in academic area of choice, (2) Problem areas in academic area of choice, (3) Leadership experience in regional Creative Problem-Solving Institutes.

**CRS 795 Master's Thesis**

Investigation or original experimental research on a problem of interest. Available resources include the Creative Studies Library and data bank, visiting scholars from various disciplines, and joint guidance from other academic departments.

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**DESIGN**

Offered by the Department of Design  
DR. CLEMENT T. TETKOWSKI, Chairperson  
Room 315 Upton Hall

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**DES 511 General Crafts Workshop**

Studio experience in various crafts suitable for both adult leisure-time activity and use with older children; individualized work in wood, metal, clay, textiles, leather, plastics, and other materials; designing for the crafts; visits to crafts exhibitions; extra class studio hours equal to class hours. Elective for all students. Art majors by advisement only.

**DES 592 Independent Studio in Design**

Independent studio experience by a student, with consultation and advice from an instructor related to area of study who agrees to supervise the study; involving studio experiments and experiences not otherwise available in regular course offerings.

**DES 640 Graduate Studio in Design**

The organization of space with paint and materials; the designed form in theoretical, abstract, and functional applications; designing for the home, commerce, industry, theater, crafts; tutorial relationship with instructor; extra class assignments, including minimum studio hours equal to class hours.

**DES 641 Graduate Studio in Product Design**

A concentrated study of product design, on an advanced level; functional and aesthetic problems in the design of useful products; experience with common and newly-developed materials; tutorial relationships with instructor; extra class assignments, including minimum studio hours equal to class hours.

**DES 642 Graduate Studio in Wood Design**

The designer-craftsman approach to advanced projects in wood; hand, power and machine tool practice; aesthetic and functional considerations in design; finishing methods, care of equipment; extra 2 field trips required. *Prerequisite:* DES 240 or equivalent.

**DES 643 Graduate Studio in Textile Design**

Advanced work in textile design and processes; weaving, printing, applique; traditional and experimental techniques; individual projects and explorations; studies of work of designer-craftsmen; tutorial relationship with instructor; extra class assignments, including minimum studio hours equal to class hours. *Prerequisite:* DES 260 or equivalent.

**DES 646 Graduate Studio in Jewelry**

Technical and aesthetic aspects of jewelry design and construction; advanced experience in fabrication techniques, casting, and stone setting according to student experience level; tutorial relationship with instructor; extra class assignments, minimum studio hours equal to class hours. *Prerequisite:* DES 270 or equivalent.

**DES 647 Casting Techniques in Jewelry**

Preparing wax models, molds, burning out, and lost-wax casting of jewelry in silver and gold; utilizing the centrifugal casting machine; related steam casting, cuttlefish casting, open-mold casting, associated techniques, extra class assignments, including studio hours equal to class hours.

**DES 649 Graduate Studio in Pottery**

Advanced study on an individual basis in pottery; practice in throwing & hand-building techniques; study of form and texture for functional and sculptural applications; color and glaze; extra class assignments, including minimum studio hours equal to class hours. Primarily for art majors. *Prerequisite:* DES 250 or equivalent.

**DES 690 Master's Project**

A study undertaken by one or more individuals on a problem of special interest; aimed at making a special contribution to design as contrasted with normal class or studio activity; may be presented, in part, as an exhibit of materials collected or prepared — including a major exhibit of design related to study — with theories and findings reported to an acceptable form according to directions given by the Graduate Office.



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## ECONOMICS

Offered by the Department of Economics  
& Political Science

DR. RAM DeSAI, Interim Chairperson  
Room B218 New Classroom Building

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### ECO 502 Workshop in Economics

Considerations of economic concepts in the curriculum; American economic system; role of government in free enterprise economy; money, banking, and credit; selected group projects in areas of investments, labor-management relations, agricultural aspects of foreign policy, economy of the Niagara Frontier, and government regulatory agencies. *Classification:* Elective for M.S. in Education majors.

### ECO 510 Economics of Education

Analysis of the economic dimensions of education; supply and demand of educational services; benefits and costs; productivity; educational finance; investment in human capital; externalities.

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## EDUCATION

Offered by the Department of Behavioral  
& Humanistic Studies

DR. CHARLES P. LaMORTE, Chairperson  
Room 308 Bacon Hall

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### EDU 500 Cross-Cultural Approaches to Education

Emphasis on the Cultural Foundations of Education. Application of relevant findings of the social sciences to problems and issues of education in culturally plural (multi-ethnic) settings.

### EDU 503 Educational Psychology

Study of various theories of learning; history of educational psychology; measurements of learning; variables and their interpretation; application of learning theory to the teaching situation.

### EDU 505 Simulated Educational and Social Systems

Performance practicums through simulations and educational games; a study of contemporary school and society in its organizational characteristics, functions, values, and conflicts, including analyses of poverty, racism, ecology, social stratification, supply and demand, authority and processes of change; a study of the theory, design, use, and evaluation of simulations and games for the elementary and secondary classroom.

**EDU 509 Personality Adjustment in the Elementary School**  
Dynamics of human behavior; prevention of maladjustment; corrective programs; formation of habits and attitudes; recent clinical research.

### EDU 511 Evaluation in Education

Background and current status of evaluation, principles, purposes and procedures of evaluation, effective interpretation and use of evaluative data; methods of recording and reporting pupil progress.

### EDU 515 Laboratory Experiences in the Study of Young Children

Observing children in various learning situations; joint teacher-student planning of learning situation; review of teaching media for young children; emphasis on stimulating intellectual curiosity through discovery; recording, interpreting and reporting childhood behavior.

### EDU 519 Applied Mental Hygiene

Principles of mental hygiene and their application to personality development, emotional and social adjustment, and human relationships; application of mental hygiene principles to processes of teaching, pupil learning, classroom management, and conduct of the teacher in lay and professional relationships.

### EDU 520 Educational Statistics I (Descriptive and Inferential)

The course is intended to help students develop a statistical frame of reference in dealing with educational and psychological problems. Basic statistical concepts are discussed and their application to inferential statistics is made.

### EDU 523 Principles and Practices of Guidance

The philosophy of guidance, its place in present education; identifying interests, and attitudes, and understanding problems of the age group and individuals; techniques of counseling and methods of investigation; the role of the teacher, specialist and administrator in guidance; school, home, community resources in a guidance program.

### EDU 525 Philosophy of Education

Principles underlying educational practices; changing concepts of education; education in a democratic society; teaching procedures as determined by a democratic concept of education. *Prerequisite:* EDU 410 or equivalent.

### EDU 526 School Communication and Public Interaction

Analysis and systematic study of the image, understanding, and support of Education by the various constituencies, such as students, teaching and non-teaching staff, board of education, individual citizens, pressure groups and organizations. Emphasis will be on effective school communication and positive public interaction.



**EDU 527 Problems in Educational Services for Young Children**

Current social and economic trends affecting the lives of young children; curriculum contributions for developing individual and group living; educational problems confronting teachers in this specialized field.

**EDU 528 Human Relations**

Discussion of inter-group problems relating to race, sex, religion, national origin, etc., dividing and integrating factors affecting communications and understanding between individuals and within groups.

**EDU 529 Adolescent Psychology**

Characteristics and problems of adolescents; relationship of adolescent behavior to earlier development; special provisions of the early secondary school for this age group.

**EDU 531 Systematic Study of Children and Youth**

Consideration of basic and special approaches to studying human behavior and development with emphasis on implications for teaching-learning processes and child guidance. Designed to help teachers and school counselors organize effective individual and group diagnostic-prescriptive plans, and to acquire skill in using selected child study techniques.

**EDU 537 Evaluation in the Secondary School**

Relationship of evaluation to instructional objectives; selecting, administering, scoring, recording and interpreting standardized and teacher-made instruments for evaluating mental abilities, educational achievements, personality characteristics, interests and aptitudes; diagnosis, guidance counseling and improving instruction; organizing programs to provide for individual differences; modern practices in recording pupil progress; statistical concepts and methods of collecting, tabulating, and interpreting data.

**EDU 540 Studies in Human Growth and Development**

Survey of research in child and adolescent growth — changing concepts in mental, emotional, social, and personality growth.

**EDU 541 Social Foundations of Education**

Relationships of school to society; contemporary social problems affecting education, social groups and institutions; school and community relations; national, state, and community organizations affecting educational programs and the development of social understandings in pupils.

**EDU 550 Career Guidance for Elementary Schools**

An introduction to career education for elementary teachers and counselors, including developmental trends in career education, theoretical bases and correlates of career choice, and career counseling

techniques. A discussion of methods and materials for use by the classroom teacher.

**EDU 555 Early Childhood Seminar**

New directions and assessment of educational experiences and approaches for children from birth through the primary years; current research; interpretation of aspects of the teaching/learning environment as they affect behavior and development in the early years.

**EDU 556 Group Dynamics in Education**

Theory and practice of group procedures in the school; development of understandings, skills and attitudes conducive to successful group leadership and participation; group study and evaluation; the school group in its sociological, psychological and philosophical setting. An experiential group. Prior consultation with the instructor desirable.

**EDU 557 Sociodrama and Role Playing in Education**

Theory and practice of sociodrama approach in the educational setting; differentiation of role playing, sociodrama and psychodrama. Exploration of doubling, role reversal and other psychodramatic methods in achieving educational objectives. An experiential group. Prior consultation with the instructor desirable.

**EDU 565 Family and the Elementary School**

Concepts in human growth and development as related to the family and the needs of the elementary school child. The interpretation of behavior dynamics and approaches toward strengthening intercommunication and the development of mutually productive strategies toward improving the learning of the elementary school child.

**EDU 570 Behavior and Development of Young Children**

Investigation of human behavior and development during infancy and early childhood periods with emphasis on educational implications and applications to individual children.

**EDU 572 Behavior and Development of Elementary School Children**

Consideration of human behavior and development of children during the elementary and middle school years. Emphasis on educational implications and applications to individual children.

**EDU 595 Understanding Educational Research**

The study of scientific methodology applied to education, basic research methods and techniques, library resources, the reading interpretation and evaluation of educational research.

**EDU 610 Principles of Open Education**

Analyses of open education movement and practices from the perspectives of philosophical and sociological foundations of education; a study of authors and classics in progressive education; identifying principles



of educational theory and organization theory in specific open education practices, including principles of learning centers, individualization, testing and record keeping, and simulation and educational games; social implications of educational reform.

**EDU 616 Problems and Practices in Higher Education**

A survey course for study of historical perspective and current status of higher education—development of higher education as an historical institution. Study of development of its function and structure with emphasis on curriculum, government, administration and finance.

**EDU 617 Seminar on the American College Student**

Examination of selected topics and issues concerned with adolescents and young adults in college and with the student cultures of which they are a part. Topics such as values, attitudes, identity, alienation, expectations, activism, rights, responsibilities and the impact of the college on students will be considered.

**EDU 618 Seminar on Student Personnel Services**

Overview of student personnel services in institutions of higher education. The philosophy, structure and administration of the personnel program and of specific services offered at colleges and universities.

**EDU 620 Educational Statistics II (Analysis of Variance)**

The second of a two-course sequence of advanced level descriptive and inferential statistics. This course deals basically with advanced concepts of correlation and regression and mainly analysis of variance as it applies to educational research studies. Topics include overview of sampling and probability, simple analysis of variance, n-way designs, multiple contrasts, analysis of covariance and statistical tests following the F-test. Topics are discussed and practiced through application on real studies. *Prerequisite:* EDU 520.

**EDU 622 Techniques of Counseling**

An introductory course in counseling designed to give access to four areas; process, theory, group awareness and practicum. It will attempt to integrate theory and practice using as a frame of reference contemporary issues.

**EDU 623 Advanced Techniques of Counseling**

Advanced integration of theories and schools of counseling with the practice in the counseling process. Special emphasis on case studies, research and evaluation of counseling. *Prerequisite:* EDU 622.

**EDU 624 Internship in Student Personnel Services I**

Actual on-the-job experience is provided in a student personnel function under the supervision of a staff member located in the area. This supervisor works closely with the instructor responsible for the course. Individual conferences between the student and the instructor are required. Permission of instructor required.

**EDU 625 Internship in Student Personnel Services II**

Actual on-the-job experience is provided in a student personnel function under the supervision of a staff member located in the area. This supervisor works closely with the instructor responsible for the course. Individual conferences between the student and the instructor are required. Permission of instructor required.

**EDU 627 Seminar in Foundations of Metropolitan Education**

The study and analysis of metropolitan educational problems, current and past, from a multi-discipline approach. The purpose of this seminar will be to examine these influences on our educational system. Can be taken for Foundations sequence or taken as an elective.

**EDU 630 Self Processes in Human Development and Education**

Consideration of self theories as they relate to child and adolescent development; emphasis on educational implications. Explorations of self technique applicable in child guidance and learning.

**EDU 633 Developmental Counseling: Elementary School**

Dimensions and techniques of developmental counseling—consulting in elementary school settings; emphasis on optimum development of all children. Useful for elementary school teachers and supervisors, child development specialists, and guidance counselors. *Prerequisite:* Graduate child/human development course or equivalent.

**EDU 675 Cognitive Processes in Human Development and Education**

Consideration of cognitive theories as they relate to child and adolescent development; emphasis on educational implications.

**EDU 680 Physical/Motor Processes in Human Development and Education**

Study of physical/motor structures and processes in human development from infancy through adulthood with special emphasis on applications to teaching/learning in cognitive, affective, and perceptual-motor areas. Consideration of basic approaches for guiding optimum physical/motor development in educational settings, and for preventing avoidable disabilities.

**EDU 682 Seminar in Colonial American Education**

Historical study of education in colonial America, including consideration of the European background and the implications of the Revolutionary Era. Ample opportunities are afforded for the exploration of students' interests within the field.

**EDU 685 Social Processes in Human Development and Education**

Consideration of processes whereby human beings from infancy through adulthood internalize cultural values/patterns and adapt social



roles/behaviors. Special emphasis on teaching/learning applications, and basic approaches for guiding optimum social/moral development in educational settings; consideration of prevention, diagnosis and treatment of social disabilities.

#### **EDU 690 Master's Project**

A study undertaken by one or more individuals on a problem of special interest; must be submitted in acceptable form according to directions given by the Graduate Office.

#### **EDU 694 Methods and Techniques of Educational Research**

A study of the background of educational research, selection and development of research problems, sources of information and data, methods of educational research, tools and techniques of educational research, collection, treatment, application and interpretation of research data, organizing and writing a research report.

#### **EDU 695 Thesis**

An individual investigation of an original problem to be submitted in typewritten form according to directions given by the Graduate Office.

#### **EDU 710 Child Development Practicum**

Supervised experiences in selected aspects of child study and developmental counseling; practical, didactic and seminar components. Student may elect general or age-level emphasis, and special foci within emphasis. *Prerequisite:* EDU 531 and EDU 633 or equivalent; teaching experience or approved substitute; permission of instructor.

#### **EDU 711 Seminar in Techniques of Counseling and Psychotherapy**

An in-depth consideration of behaviorist and rational-emotive techniques with emphasis on the development and application of skills. Topics include: systematic desensitization, verbal reinforcement, assertive training and rational-emotive techniques. *Classification:* Advanced graduate students in Guidance or Personnel programs. *Prerequisite:* EDU 622, EDU 623, and permission of instructor.

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Offered by the Department of Curriculum & Supervision  
DR. GERALD O. PAYNE, Chairperson  
Room 302 Bacon Hall

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#### **EDU 501 Elementary School Education**

An examination of contemporary curriculum trends, issues and research influencing instruction in the elementary school. Emphasis will be placed upon the selection and discussion of current developments and controversies affecting selected areas of the elementary school.

Selection, development and analysis of contemporary issues or problems will culminate in a research paper appropriate to the student's present assignment or concern. Required of non-degree students. Students should have completed EDU 595 and at least 24 graduate hours.

#### **EDU 502 Practicum in Programmed Instruction**

The use of teaching machines and programmed instruction, programming techniques and means of evaluating programs. Laboratory experiences.

#### **EDU 508 Supervision of Student Teaching**

Teacher-education programs; the role of the public school in the student teaching program; student teaching as a cooperative responsibility; the role of the student teacher, supervising teacher, and the college supervisor; analysis of teaching behaviors; preparation for the student teacher; daily and long-term planning; conferences; evaluating student-teaching experiences; human relations in student teaching.

#### **EDU 510 Seminar in Teaching Behavior**

Objective observation, analysis, modification of teaching/learning act through study of literature, acquisition of skill on use of analysis systems, construction or adaptation of model to be used to help change individual's teaching behavior.

#### **EDU 512 Educational Applications for Media**

Exploration of applications of educational media to the teaching/learning process. Emphasis on research findings and their implications for media utilization within specific instructional designs.

#### **EDU 513 Survey of Basic Concepts of Elementary Reading Instruction**

A course designed for either large or small group instruction. A review of the research and literature pertaining to the basic concepts underlying reading methods, materials, testing devices, and management programs. The reading process from readiness for reading to mature, effective reading skill. No prerequisite.

#### **EDU 518 Selected Topics in Media Utilization**

Topics of common concern explored in depth; individual investigation of a specific problem; recent developments in the field of instructional media. *Prerequisite:* EDU 418 or equivalent.

#### **EDU 532 Secondary School Education**

Origin and functions of secondary education; curriculum patterns; guidance and exploratory programs; articulation between elementary school and senior high school; extra-curricular activities; evaluation in the secondary school; research methods in solving problems listed above and others suggested by students. Required of non-degree early secondary students. *Prerequisite:* EDU 595 and at least 24 graduate hours.



**EDU 533 The Teaching/Learning Environment of the Elementary School**

Identification of learning problems in behavioral and academic areas; philosophical and psychological implications for classroom teachers; methods, materials and techniques for working with individual learners; teacher and pupil roles in the teaching/learning environment; the classroom as a social group.

**EDU 538 Internship and Seminar I**

Full-time internship in an inner-city school under the direction of an experienced teacher. The corps members will be assigned to one class and will have full responsibility for planning and carrying out the program of instruction. The Team Leader will serve to coordinate the efforts of several teams which will include both experienced teachers and interns, therefore permitting cooperative and unified efforts toward planning and carrying out the program of instruction. Special emphasis will be placed on team teaching, and individualized instruction. Community work and involvement will be required but may be limited to the school community. Periodic seminars will focus attention on problems effecting inner-city schools, and their community.

**EDU 542 Seminar in Secondary School Curriculum**

Curricular and extra-curricular programs related to social, economic, and community changes, relationship of principles and procedures of curriculum development to educational objectives; relationship of extra-curricular activities to curriculum areas; adaptation of the curriculum to adolescent abilities, needs, and interests; various patterns of curriculum development; financing, organizing, scheduling, and supervising extra-curricular activities; bases for determining extent and type of student participation in school management.

**EDU 543 Curriculum for the Young Child**

Presentation of basic principles and concepts underlying curriculum planning for children from nursery through third grade. Focus on the objectives of learning experiences, identification and description of appropriate learning experiences and materials will be examined. Organizational patterns and curriculum content will be studied in relation to an integrated curriculum.

**EDU 544 Middle School Curriculum**

Teacher of the early adolescent will acquire knowledge of and practical skill in building middle school curriculum. The course will deal with the background of the middle school, nature of the early adolescent, subject matter in the middle school, and the way in which a middle school curricula can be facilitated.

**EDU 545 Teaching Reading in Secondary School**

Designed to develop an awareness of the need for reading instruction in the secondary school. Effective secondary reading programs discussed

and compared. Effective instructional strategies designed to improve reading of secondary students studied. Strategies for planning and implementation of an effective secondary program covered. All the above topics covered in a context of the nature of the reading process. No prerequisite.

**EDU 546 Improvement of Instruction in Language Arts**

Major aspects of the elementary language arts program will be explored. Intended to help students acquire skills in working with children and knowledge of research, literature.

**EDU 547 The Metric System in the Elementary and Middle School Curriculum**

Major concern is for the student to learn how to include the metric system in the elementary school curriculum. The ability to introduce a functional metric program into the school shall be developed. Appropriate curriculum guides, methodologies and materials shall be included.

**EDU 551 Mathematics Curriculum in the Elementary School**

Emphasis on modes of instruction, development of diagnostic skills, needs of slow and rapid learners, selection and use of appropriate teaching materials in the elementary school mathematics programs.

**EDU 552 Legal Problems of Education**

Foundations of Public School Law; legal problems arising out of the operation of the public school system; New York State Education Law; selected cases from state and federal courts; common law principles.

**EDU 553 Curriculum Planning for the Urban Child**

Familiarity with the problems peculiar to children and adolescents affected by lack of opportunity and differing environmental conditions. Emphasis on factors which have particular relevance for developing an appropriate curriculum for the urban child.

**EDU 554 Social Studies in the Elementary School**

A study of goals in elementary social studies and their relationships to organizational concerns, approaches, methods, techniques, media and evaluation; the review and development of appropriate research for application to elementary social studies teaching.

**EDU 558 Seminar in Teaching the Urban Child**

Study, analysis, and evaluation of classroom procedures relevant to the urban child. The purpose of the course is to afford participants the opportunity to re-think and reconstruct the educational program in his classroom in relation to research, methods and materials, and characteristics of the child. Major topics: self-concept, learning and the urban child, curriculum materials, bi-lingual programs, integration of schools, role of parents, community agencies, research findings related to the urban child.



#### **EDU 559 Workshop in Learning Centers**

Afford teachers an opportunity to study the concept of open classroom, the concept of learning centers, way to organize learning center. Class will be organized as an open classroom with learning centers with students participating in the experiences.

#### **EDU 562 Reading Workshop for Classroom Teachers**

Designed for in-depth study of reading methods, materials and approaches with emphasis on construction of materials to provide for individual differences in program and in content areas.

#### **EDU 563 Improvement of Instruction in Reading in the Intermediate Grades (Middle School)**

Designed to help teachers of intermediate and middle school pupils to improve reading programs and reading instruction in their classes. Emphasis is on understanding of the reading skills to be developed during these years by the pupils. Development of a total reading program that coordinates instruction in basic skills, content area curricula and development and extension of wide reading interests is emphasized. The teaching behaviors and management skills that constitute the delivery system for the total reading program are stressed. *Prerequisite:* EDU 513 or equivalent.

#### **EDU 571 Reading in the Primary Grades**

Factors in pre-school and primary grades influencing reading success; concept of readiness; current reading philosophies; pre-reading activities; using approaches to beginning reading; skill development; organizing the program; evaluation techniques; research.

#### **EDU 573 Teaching Elementary School Reading Through Supplementary Materials**

Develops teacher competency in the use of films, slides, recordings, trade books and community resources as part of the reading program. Use of these materials to develop the content curricula as well as the basic program emphasized. Understanding pupil interests and needs as important factors related to reading is developed. Course *not* recommended for secondary teachers. No prerequisite.

#### **EDU 574 The Elementary School Curriculum**

Review of learning processes, purposes of the elementary school; curriculum development; types of curriculum organization; instructional strategies; materials; community resources; individual differences.

#### **EDU 576 Instructional Supervision**

This course emphasizes the various components of instructional supervision, including the nature of the personal relationship between supervisor and teacher, the process of providing feedback on classroom performance, the use of methods for systematic observation of classroom

behavior and the role of the supervisor in further developing the teacher's competencies.

#### **EDU 601 Seminar in Elementary Education**

The use of educational research methods in studying current problems in Elementary Education; seminar format is designed to encourage the selection and discussion of contemporary educational problems; exploration and selection of a significant problem in the student's area of interest and submission of a research paper. Required of candidates for the M.S.Ed. degree. Students should have completed EDU 694 and at least 24 graduate hours.

#### **EDU 607 General School Administration**

Principles of school administration; historical beginnings; national, state, and local responsibilities for education; district; township, and county administrative units; boards of education; school services; health, supervision, research, library, and attendance; teacher selection, salary, tenure, in-service education; school building programs.

#### **EDU 608 Administration of Programs for the Young Child**

Designed to deal with the role of the administrator in developing an educational environment for young children; organization, management, equipment, and curriculum appropriate to the developmental needs of the young child and his family.

#### **EDU 609 Improving Reading in the Content Areas**

An analysis of the special reading problems found in the subject area instructional materials used in the intermediate and secondary grades. Topics to be discussed as they relate to the content areas include: The Reading Process, Reading Skills, Evaluation, Readability, and Instructional Procedures. *Prerequisite:* EDU 513 or EDU 545.

#### **EDU 612 School Business Management and Finance**

A study of school district business management functions and financing including such topics as: Accounting, Reporting and Auditing; Program Budgeting Systems; Investments and Debt Service; Purchasing, Inventory and Insurance; Sources of Income; Civil Service Law and Personnel; Collective Negotiations; and Auxiliary Services.

#### **EDU 613 Diagnosis and Prescription for the Classroom Teacher**

Emphasizes a diagnostic-prescriptive approach to developmental reading. Topics covered include: Analysis of reading success and causes of reading failure; strategies for identifying disabled, average and gifted readers and students who require a modified reading program; materials and teaching skills for working with each of these classes of readers to individualize reading instruction; standardized, informal and criterion referenced tests; utilization of case studies and reports provided by supportive personnel; procedures for student referral; preparation of case summaries and reporting to parents. *Prerequisite:* 513 or the equivalent.



#### **EDU 614 The Teaching of Reading**

Importance of reading in present day society, research in child development and learning and its implication in the teaching of reading; trends in the teaching of reading; developmental levels of reading; reading in the content areas; methods and materials; evaluation and guidance of pupil growth in reading. *Prerequisite:* EDU 513.

#### **EDU 615 Applying Psychology to the Teaching of Reading**

An examination of theories of learning and psycholinguistics as they apply to the teaching of reading. Topics covered: theories of language and language acquisition, learning theories related to learning to read, especially as related to readiness, attention, retention and extinction, transfer and practice, personality factors that affect reading. *Prerequisite:* EDU 513.

#### **EDU 626 Model Programs of Curriculum Development for the Young Child**

This course is designed for graduate students and provides an in-depth study of the various organizational patterns and curriculum procedures of model Early Childhood Programs for young children. Research will be studied as it relates to the needs and interests of early childhood and as a basis for critical evaluation of present practices in this field.

#### **EDU 628 Reading Diagnosis and Prescription: Theory**

First course of the clinic and remedial sequence for master's degree students in Elementary Education. Topics covered: causes of reading failure; characteristics of problem readers; procedures for diagnosis of reading problems; methods and materials for remedial instruction; working with parents of children with reading problems; the role of the reading specialist in the school. *Prerequisite:* EDU 513 or the equivalent and permission of the instructor.

#### **EDU 631 Supervision of Teaching**

Principles of supervision; classroom observation; evaluating teaching; effect of teachers' purposes and research on choice of subject matter and teaching procedures; teacher-pupil relationships; group and individual conferences; induction of new teachers; intervisitation; demonstration teaching; teachers' meetings; bulletins; workshops; evaluation of program.

#### **EDU 632 Reading Diagnosis and Prescription: Clinical Practicum**

Designed to follow EDU 628. Gives the student opportunity to apply knowledge of methods, materials, and theory of reading diagnosis and prescription in a supervised clinic setting. Children with reading difficulties are assigned to each student. Student is expected to diagnose and plan for the remediation of each child's reading problem and is required to write summary reports of the pupil diagnosis and plans for remediation for both schools and parents. Students learn and practice

techniques for conferring with parents of pupils studied. *Prerequisite:* EDU 513, 628, and permission of the instructor.

#### **EDU 634 Practicum in Remedial Reading**

Designed to follow EDU 632. Culmination of the clinic and remedial focus in the reading concentration. Student has further opportunity to incorporate into his teaching behaviors the skills of diagnosis and prescriptive planning. Develops, under supervision, special instructional skills for the remediation of reading difficulties. Requirements: prescribe, and implement a remedial reading program for one or more pupils referred to the Reading Center, develop diagnostic case study for each pupil, hold parent conferences, prepare final reports to parents and schools for each child. *Prerequisite:* EDU 513, 628, 632, and permission of the instructor.

#### **EDU 659 Workshop in Individualizing Instruction**

A summer workshop to explore the philosophies surrounding the concepts of individualizing instruction, applying these concepts to the design of a program which may be implemented in the elementary school. Students are encouraged to apply in teams from a given school or district and are encouraged to gain support for implementing their program from school administrators.

#### **EDU 666 Encouraging Creative Writing in the Elementary School**

Understanding the creative process, releasing the creative writing potential of children, creating the appropriate classroom atmosphere, developing techniques and materials for writing stories, poems, and other forms.

#### **EDU 670 Principles of Curriculum Design**

Basic principles and procedures of curriculum development. Examines factors which influence curriculum decisions. Relates goals of the school to curriculum objectives and organizational patterns. Analyzes the role of the classroom teacher in curriculum decision-making.

#### **EDU 684 (SSE 685) Planning for Educational Change**

Perspectives on planned educational change: models of change, innovations, and adopters, change agent roles, change strategies and techniques, information networks. The student will devise a plan for introducing an innovation in an educational setting.

#### **EDU 690 Master's Project**

A study undertaken by one or more individuals on a problem of special interest; must be submitted in acceptable form according to directions given by the Graduate Office.

#### **EDU 695 Thesis**

An individual investigation of an original problem to be submitted in typewritten form according to directions given by the Graduate Office.



### **EDU 701 Fundamentals of Administration**

Principles and theories which influence decision-making processes in education; implications of philosophical, psychological, sociological, scientific and technological factors; the study and application of research in group organization, leadership, communication and related concepts of power and authority. *Prerequisite:* Thirty hours of approved graduate studies, to be reviewed by Committee. Open to CAS candidates only.

### **EDU 702 Fundamentals of Administration II**

The school in its societal setting; principles of school organization and resulting patterns at national, state and local levels; the bases of curriculum development and supportive administrative/supervisory functions; analysis of legal structures; problems of community relationships; aspects of staff recruitment, orientation, evaluation and negotiations. *Prerequisite:* EDU 701.

### **EDU 703 Internship in Administration**

Full time experience in administration; planning and directing appropriate educational experiences under guidance and supervision of experienced administrator; seminar to run concurrently. *Prerequisite:* EDU 701 and approval of instructor.

### **EDU 704 Seminar in Administration**

Problems of beginning administrators and supervisors; crucial issues in elementary education; function of theory and philosophy in problem solving and decision making. *Prerequisite:* EDU 701 and approval of instructor.

### **EDU 706 Problems in School Administration**

Utilization of organization development techniques and other problem solving and diagnosing skills as means of reducing and resolving problems in school administration. Course focuses on individual and group problem solving, group decision making, communication, diagnosis and analysis, conflict management, data gathering and team development. Simulations and role playing used. *Prerequisite:* EDU 701 and 702.

### **EDU 707 Computer Applications in Education Administration**

Course is designed to acquaint student with recent advances in cybernetic systems as effective tools to improve instruction, organization, administration of education. Laboratory experiences emphasize effective use of data processing systems rather than technical aspects of programming.

### **EDU 708 Educational Facilities Planning**

A study of the relationships between the physical environment and effective teaching; examination of school designs, construction, equip-

ment; review of legal and financial considerations related to school plant.

### **EDU 709 Problems in School Supervision**

Advanced study of special problems of supervision; the roles of the teacher and supervisor in the total school program; human relations; group dynamics, creative teaching; in-service education; teacher selection and evaluation; self-evaluation by teachers; educational leadership; role of special teachers. Open to CAS candidates only. *Prerequisite:* EDU 631 and 701.

### **EDU 714 Personnel Administration**

Examines concept of personnel administration and problems related to personnel programs, policies and procedures; relates goals of organization and management to goals and welfare of staff members.

### **EDU 715 School Administration and Research**

A study of research as applied to school administration; major sources and review of research; individual project and administrative problem-solving; proposal writing and administration. *Prerequisite:* EDU 694 or equivalent; CAS Program candidates or permission of instructor.

### **EDU 734 Supervision of Reading Instruction**

Designed for advanced graduate students specializing in clinic and remedial reading. Students are designated Reading Center Supervisors and function as staff members of the Reading Center. Gain experience in supervision of reading teachers as they plan and implement reading programs for pupils with mild to severe reading problems. Students work with resident reading faculty and with students taking EDU 628 and 632 reviewing and evaluating case studies; plans for remediation, final reports to schools and parents. *Prerequisite:* EDU 513, 628, 632, 634 and formal application submitted to the Reading Center Director.

### **EDU 735 Administrators and the Reading Program**

A course for practicing school administrators and supervisors and for students enrolled in the CAS Administration and Supervision Program. Explores the role of the administrator in the development and implementation of total school reading programs. Topics covered: elements needed in effective reading programs, evaluation of reading programs and reading instruction, relationship of the administrator to reading personnel, roles of reading personnel, staff development as part of reading programs, the reading program and public relations, research related to reading program development and instruction. *Prerequisite for students in the CAS Program:* EDU 701. Other students must be currently employed as administrators, supervisors or consultants or reading specialists.



## ENGLISH

Offered by the Department of English  
DR. PAUL V. HALE, Chairperson  
Room 327 Ketchum Hall

All English courses are numbered according to the system explained below. Additional information (reading lists, specific emphases and grading policies) is available in the English Department Office.

### CENTURY levels:

- |  |  |
|--|--|
| 500—graduate courses (open to all graduate students) | 40-49 American literature  |
| 600—graduate courses (primarily for degree students) | 50-59 Genre (e.g., poetry, fiction, drama)                             |
|  | 60-69 Children's literature; young adult literature, English Education |

### DECADE categories:

- |                                 |                                       |
|---------------------------------|---------------------------------------|
| 00-09 Writing and Communication | 70-79 Linguistics                     |
| 10-29 English literature        | 80-89 Folklore                        |
| 30-39 World literature          | 90-99 Research; project, thesis, etc. |

### ENG 500 Studies in Individual Writers

A depth analysis of one or a combination of significant authors chosen from a particular historical period, literary movement, etc., in English, American, or other literature. Individual writers to be studied will be identified in the schedule of course offerings. May be taken more than once for credit with departmental approval.

### ENG 520 Irish Literature

Gaelic prose and poetry in translation; Irish contributions to literature in English; the poetry of Yeats, the plays of Synge, the 1916 poets, the Blasket writers, and other Irish literature since 1889.

### ENG 522 Shakespeare: The Comedies

Principal comedies from *Love's Labour's Lost* to *The Tempest*; backgrounds of Elizabethan comedy; Shakespeare's early experimental work; later mature achievement and the comic idea in farce, high comedy, bitter comedy, and romance.

### ENG 523 Shakespeare: The Tragedies

Backgrounds of Elizabethan tragedy; study of the aesthetic and philosophic qualities of the major tragedies; readings in criticism.

### ENG 530 Literature of Greece and Rome

Readings in English translation and discussion of selected masterpieces; relationship to later literature in English and other modern languages.

**ENG 532 Literature of Continental Europe: The Renaissance**  
Petrarch, Boccaccio, Machiavelli, Castiglione, Ariosto, and others in English translation; their relation to the literature of England.

### ENG 534 Literature of Continental Europe: The Nineteenth Century

Readings in English translation of selected masterpieces; Rousseau and his disciples; romantic poetry, fiction, and drama; realism, naturalism, symbolism in the various types of literature.

### ENG 535 Literature of Continental Europe: The Twentieth Century

Trends in continental literature from the turn of the century to Post World War II. Particular attention to French, German, Italian, and Russian works in translation.

### ENG 536 The Bible as Literature

Representative genres of biblical literature will be read and analyzed in relationship to theme, historical and cultural background, and modern biblical literary criticism.

### ENG 538 Literature and the World Today

Current ideas expressed through novels, plays, and critical reports; contribution of the magazine, newspaper and motion picture to the image of America. *Classification:* Not open to English majors.

### ENG 540 Regional American Literature

Literature of certain geographical and cultural areas of the United States: New England and Eastern, Southern, Western; folkways in American letters; local color and use of regional materials, particularly in fiction.

### ENG 541 Romantic Movement in American Literature

A study of the nature of romanticism. Social, cultural and literary backgrounds of American romanticism. Romantic literary theory. Study of the early Romantics, Poe, Hawthorne, Melville, the Cambridge poets, and Whitman.

### ENG 542 Nineteenth Century American Novel

Study of evolution of the novel form from early Gothic and sentimental motifs through Romance and Symbolism to Realism and Naturalism, with special attention to social themes. Such writers as Brown, Simms, Cooper, Twain, Howells, James Frederic, Crane, Chopin.

### ENG 545 Emerson and Thoreau

Writings of Emerson and Thoreau against the background of European and American transcendentalism.

### ENG 546 Major American Poets

Nineteenth century poets of first rank and their contributions to a national literature.



**ENG 554 The Novel in English, 1900-1945**

Major American and/or British novels, their artistic and social significance.

**ENG 560 Studies in Children's Literature**

Types of children's literature; criteria of book selection; reading interests of children; preparation of bibliography. May not be taken for credit by students who have taken ENG 260.

**ENG 561 The Heroic Tradition in Children's Literature**

Traditional heroic works of literature as they have been interpreted for children. *Prerequisite:* ENG 260 or ENG 560.

**ENG 563 Classics of Children's Literature**

Study in depth of several literary classics in children's literature. *Prerequisite:* ENG 260 or ENG 560.

**ENG 564 Fantasy and the Modern Literary Fairy Tale**

Survey and evaluation of the significant writers of fantasy for children from Hans Christian Andersen to the present. *Prerequisite:* ENG 260 or ENG 560.

**ENG 565 Realistic Fiction for Children**

Realistic fiction; regionalism, ethnic and religious groups, children of other lands. *Prerequisite:* ENG 260 or ENG 560.

**ENG 566 Poetry for Children**

Adult poetry of interest to children; poetry written specifically for children. *Prerequisite:* ENG 260 or ENG 560.

**ENG 568 Folklore in Children's Literature**

A critical analysis of the traditional elements in children's literature. *Prerequisite:* ENG 260 or ENG 560.

**ENG 569 Literature for the Secondary School**

Readings in prose and poetry appropriate to the secondary school; examination of the function of literature for young adults in the secondary English program. May not be taken for credit by students who have taken ENG 461 (213).

**ENG 570 Aspects of Language: Assumptions and Analysis**

This course introduces students to content and concepts of modern language research and applications through exposure both to the analysis of language and to guided readings on language. *Classification:* Required for English majors (if 470 has not been taken previously.) *Prerequisite:* None. *Prohibitions:* May not be taken if ENG 470 has already been taken.

**ENG 572 Comparative Approaches to English Structure**

The structure of English will be examined comparatively from three or

more theoretical perspectives. One of the perspectives will include a structural approach and another a transformational approach to English grammatical analysis. *Classification:* This should satisfy the grammar requirement for certain majors. Otherwise, it is an elective. It should not be taken if ENG 472 has been taken previously.

**ENG 573 Applied Linguistics**

The practical application of linguistic concepts and research to educational problems in our society. *Prerequisites:* ENG 470 or 570.

**ENG 581 Folklore and Literature**

Uses of folklore, in terms of both content and style, in major literary works and periods, with emphasis on English and American literature. *Prerequisite:* Six hours of undergraduate or graduate courses in literature, or permission of instructor.

**ENG 583 British Folklore**

Collection and research in English, Scottish, and Irish folk traditions, with emphasis on developmental work in the nineteenth and twentieth centuries; relationship between British and American folklore scholarship. *Prerequisite:* Permission of the instructor.

**ENG 586 The Folktale and Other Traditional Narrative Forms**

Different forms of narrative folklore; history of folktale studies; scholarly tools of folk narrative research and their use. *Prerequisite:* Six hours of undergraduate or graduate courses in literature, or permission of instructor.

**ENG 610 Studies in Medieval English Literature**

Selected period, genre, or writer of medieval literature. May include Old English, medieval romance, drama, or alliterative poetry; or Chaucer, the Gawain-poet, Malory, or Langland.

**ENG 611 Chaucer**

A reading of Chaucer's minor poems (*Book of the Dutchesse*, *Legend of Good Women*, *Parlement of Fowls*, *House of Fame*) and of the major epic, *Troilus and Criseyde* in terms of their social statement and aesthetic design. This course complements ENG 411; both courses may be taken for credit.

**ENG 613 Studies in Seventeenth Century English Literature**

Selected authors, forms, or literary movements.

**ENG 614 Studies in Eighteenth Century English Literature**

Selected authors, forms, or literary movements.

**ENG 615 Studies in Nineteenth Century English Literature**

Selected authors, forms, or literary movements.



**ENG 616 Studies in the Novel**

Seminar in selected aspects of the novel; selected authors, forms, or literary movements.

**ENG 617 Milton's Poetry and Prose**

A study of the poetry and prose of John Milton.

**ENG 618 Studies in Modern English Poetry**

Significant trends and writers in English poetry since 1900; close study of two or three writers from the following list: Hardy, Housman, Masfield, Eliot, Auden, and Thomas.

**ENG 621 (511) Origin and Development of English Drama**

Liturgical beginnings of English Drama; miracle and morality plays, interludes; rise of English comedy and tragedy, forerunners and contemporaries of Shakespeare.

**ENG 624 Seminar in Early Victorian Literature**

An in-depth study of selected figures, problems, and movements from 1830-1860. Emphasis on poets and prose writers, including Tennyson, Browning, Arnold, Mill, and Newman.

**ENG 625 Seminar in Late Victorian Literature**

An in-depth study of selected movements and figures from 1860-1914. Emphasis on Pre-Raphaelites and Decadents, Hardy and Hopkins, Ruskin and Pater.

**ENG 633 Seminar in Comedy**

Practice and theory of comedy from Aristophanes to the present.

**ENG 634 The Symbolist Poets: A Comparative Study**

The symbolist movement in America and Europe, with emphasis upon such writers as Wallace Stevens, W. B. Yeats, Charles Baudelaire, Arthur Rimbaud, Paul Verlaine, Stephane Mallarme, Rainer Maria Rilke, and Frederico Garcia Lorca.

**ENG 637 Comparative Drama: Tragedy**

An exploration of tragic form and vision from Aeschylus to the present.

**ENG 640 Studies in American Literature**

Selected aspects of literary culture in the United States from the Colonial period to the twentieth century. Literary movements and periods, intercultural relationships, and the influence of religious and philosophic areas upon literature; focus upon selected areas and key figures.

**ENG 648 Studies in Modern American Poetry**

Significant trends and figures in American poetry since 1912; close study of two or three writers from the following list: Robinson, Frost, Stevens, Jeffers, Millay, Cummings, Benet, Crane, Nicholl, and Lowell.

**ENG 650 Studies in Contemporary Drama I**

Selected emphasis in drama from the 1880's until the end of World War II of such playwrights as Ibsen, Strindberg, Chekhov, Lorca, Synge, O'Casey and O'Neill.

**ENG 651 Studies in Contemporary Drama II**

Selected emphasis in drama since World War II. Includes Epic Theatre of Cruelty of such playwrights as Brecht, Ionesco, Beckett, Genet, Miller, Albee, Pinter, Baraka and Arrabal.

**ENG 652 Literary Criticism**

Examination of primarily the theoretical and, secondarily, the practical bases of critical analysis and evaluation of literature.

**ENG 690 Master's Project**

Research or investigation of a particular problem, to be planned and carried out by student with consultation and guidance from instructor.

**ENG 692 The Teaching of Writing**

An advanced course in the teaching of writing discussing: the philosophical, psychological, and sociological foundations needed to teach writing; the relation of forms of thinking, rhetoric, and communication theory to writing; the management of a writing program; and an introduction to research in the teaching of writing. *Prerequisite:* A course in advanced writing, creative writing, or journalism, or the permission of the instructor.

**ENG 694 Research in Literature and Language**

Examination of basic problems that arise in research. *Note:* It is recommended that this course be taken early in the student's graduate program.

**ENG 695 Thesis**

An individual investigation into a topic approved by an appropriate faculty member and conducted under his guidance.

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**EXCEPTIONAL CHILDREN EDUCATION**

Offered by the Department of Exceptional  
Children Education

DR. HORACE MANN, Chairperson  
Room 201 Ketchum Hall

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**EXE 505 Survey of Specific Learning Disabilities**

Survey of specific learning disabilities in elementary school children; methods of identifying and assessing problem; theoretical bases of remediation; major educational techniques.



**EXE 507 Secondary Work-Study Programs for the Mentally Retarded**

Necessary knowledge, skills, attitudes for planning, coordinating work-study programs for retarded in secondary school. *Prerequisite:* EXE 514 or equivalent.

**EXE 508 Understanding the Problem Child in the Classroom**

Personal and social factors related to problem child in educational setting; study of individual pupil; modification of specific problems. *Prerequisite:* EXE 555.

**EXE 509 The Gifted Child**

Nature, needs of children who are gifted; examination of provisions as acceleration, partial-segregation, enrichment, special classes; criteria for identifying; implications for classroom teacher.

**EXE 513 Techniques for Assessing Exceptional Children**

Analysis of formal and informal classroom assessment techniques of use in planning instruction for exceptional children.

**EXE 514 Curricular Concepts for the Educable Mentally Retarded**

Basic curricular concepts and theories; different curriculum models, instruction and management strategies.

**EXE 516 Diagnostic Principles and Procedures in Speech Pathology**

Investigation and assessment of diagnostic speech and language tests with emphasis on the more recently developed. Experience in their application in the clinical evaluation of speech problems.

**EXE 520 Teaching the Trainable Retarded**

Assessment, evaluation of trainable individual; organization of curriculum; selection and development of instructional materials; counseling of parents.

**EXE 525 Contingency Management in the Classroom**

Contingency management techniques in classroom academic and management problems. Theoretical percepts, professional language of behavior modification; shaping, modeling, positive and negative reinforcement; token systems.

**EXE 527 Guidance of Children Who Are Exceptional**

Education, social and vocational guidance of children who are exceptional because of intelligence, physical development, behavior, speech and hearing.

**EXE 540 Childhood Language Disabilities**

Survey of language disabilities of children with different exceptionalities; nature and scope of language; identification and description

of language deviance; formulation of remedial approaches for children with different language problems.

**EXE 555 Children With Special Needs**

Traditional and evolving concepts of exceptionalities; nature; implication for schools and society.

**EXE 559 Seminar in Stuttering: Theory and Research**

Major etiological theories of stuttering; research in remediation of stuttering behavior.

**EXE 600 The Trainable Mentally Retarded: Trends, Problems and Issues**

Major problems, trends and issues for effective programs for trainable mentally retarded; implications for educational, vocational institutional, and community planning. *Prerequisite:* EXE 520.

**EXE 601 Psychological and Social Aspects of Mental Retardation**

Nature, etiology, diagnosis, classification and social implications of mental retardation to individual, family and community. *Prerequisite:* EXE 555 or equivalent.

**EXE 602 Administration and Supervision of Programs for Exceptional Children**

Aspects of educational leadership necessary to formulate, organize, implement and evaluate quality public school programs and services for exceptional children. *Prerequisite:* EXE 404 or 514.

**EXE 603 Internship in Mental Retardation and Physical Handicap**

An opportunity to apply the theories and principles learned in cognitive courses to actual practices in administration, diagnostic, supervisory, recreational and community service roles in programs for the retarded. *Prerequisite:* Certification in field.

**EXE 604 Curriculum Workshop for the Physically Handicapped**

Developing realistic curricula for physically handicapped children in the elementary school grade range; selection and development of suitable group and individual activities for instruction of such children. *Prerequisite:* EXE 555 or equivalent.

**EXE 605 Seminar in Mental Retardation**

Problems, issues, practices, research, theories, methodologies, program innovation and change in field of mental retardation. *Prerequisite:* Majors in Exceptional Children Education.



**EXE 606 Supervision of Student Teachers in Mental Retardation/Physical Handicap**

Responsibilities of sponsor teachers; techniques of evaluation and conferring with students; determining content of student teaching experience; ways of helping students become effective teachers of the retarded/physically handicapped. Two years of successful teaching experience as certified MR teacher.

**EXE 608 Person to Person Interaction for Clinical Teaching**

Knowledge, skills, behaviors affecting interaction with others. Communication in dyadic encounters and in groups considered. Emphasis on immediate application and practice. Participation in the workshop-type activities required.

**EXE 609 Advanced Seminar in Voice and Articulation Problems**

Etiology and treatment of severe voice, articulation problems, and esophageal speech. Investigation of current research. *Prerequisite:* EXE 306.

**EXE 610 Expanding Self Awareness for Effective Teaching**

Understanding and acceptance of personal feelings as they affect teaching behavior; impact on others; ability to listen, be attentive; the effect one's behavior has in teaching/learning situations with children having learning and behavioral disorders. A Lab fee is required. *Prerequisite:* Majors in Exceptional Children Education or permission of the instructor. Only S or U grades given.

**EXE 611 Externship in Communication Disorders**

Experience in a community speech and hearing clinic three half-days a week providing diagnosis and therapy to variety of speech, hearing and language problems. (Meets clinical requirement of 150 graduate hours of ASHA).

**EXE 612 Neuropathologies of Speech**

Neuropathologies of adult aphasia, cerebral palsy and related motor speech disorders, brain damage in childhood. Emphasis on diagnostics and therapeutic methods. *Prerequisite:* EXE 307.

**EXE 613 Curriculum Planning for Clinical Teaching**

Workshop in diagnostic prescriptive teaching, diagnosing educational needs, prescribing educational programs, implementing recommendations, evaluating outcomes with framework of theoretical instructional system. *Prerequisite:* EXE 505, permission of the instructor.

**EXE 614 Prescriptive Teaching of the Educable Mentally Retarded**

Individualized teaching procedures; psychoeducational diagnosis; development, implementation and evaluation of prescriptive teaching practices.

**EXE 615 Graduate Practicum for LBD Clinical Teaching**

Clinical practicum situation for graduate students in Learning and Behavioral Disorders. Application of theoretical learning and behavior models through direct involvement with disabled children under the guidance of clinical educational specialists. *Prerequisite:* 20 hours of graduate study, including EXE 613, by permission of instructor *only*, at least one semester prior to registration. Only S or U grades are given.

**EXE 617 Seminar in Cleft Palate**

Clinical management of cleft palate persons; diagnostic and therapeutic methods; consideration of etiologic, embryologic, morphologic, psychologic and craniofacial growth factors. *Prerequisite:* EXE 307.

**EXE 618 Seminar in Language**

Current issues in the area of language development or language disorders. Clinical applications. *Prerequisite:* Permission of the instructor.

**EXE 621 Communication Problems of the Mentally Retarded**

Speech and language needs of the mentally retarded; role communication plays in the personal, social and occupational adjustment of the retarded. *Prerequisite:* Certified MR teacher or certified speech clinician.

**EXE 622 Theoretical Aspects of Language Diagnosis and Therapy**

Theoretical approaches to language, language disorders, diagnosis and remediation; evaluation of existing diagnostic-therapeutic methods; development of new approaches to helping the language deviant child.

**EXE 624 Seminar in Audiology**

Research and current clinical advances in Audiology; relationship of measurement to diagnosis. Observation and participation in advanced diagnostic appraisals. *Prerequisite:* EXE 414 or equivalent.

**EXE 630 Psychoeducational Clinical Practicum**

Clinic centered diagnostic-prescriptive laboratory experience; students diagnose educational needs, prescribe educational programs; implement recommendations; evaluate outcomes within theoretical instructional systems. *Prerequisite:* EXE 613; 6 sem. hrs. reading and permission of the instructor.

**EXE 690 Master's Project**

Student undertaken by one or more individuals on a problem of special interest, submitted in acceptable form according to directions given by the Graduate Office.

**EXE 695 Master's Thesis**

Individual investigation of original problem submitted in typewritten form according to directions given by the Graduate Office.



## FINE ARTS

Offered by the Department of Fine Arts  
PAUL D. MARTIN, Chairperson  
Room 315C Upton Hall

### **FAR 600 Graduate Studio in Drawing — 3-9 cr. hrs.**

Individual concentration in drawing for advanced students; emphasis on growing facility of expression, application to painting and graphic arts; tutorial relationship with instructor; use of model; related study and gallery visits; extra class assignments, including minimum studio hours equal to class hours.

### **FAR 610 Graduate Studio in Painting — 3-9 cr. hrs.**

Individual activities in painting for advanced students; emphasis on personal growth and mastery of chosen media; tutorial relationship with instructor; studio and outdoor problems; use of model; related study and gallery visits; extra class assignments, including minimum studio hours equal to class hours.

### **FAR 620 Graduate Studio in Photography — 3-9 cr. hrs.**

Advanced black-and-white and color photography; as a form of expression, as illustration, as event-recording; as used in the making of teaching aids and as used in the planning of publications; tutorial relationship with instructor; extra class assignments, including minimum studio hours equal to class hours.

### **FAR 630 Graduate Studio in Printmaking — 3-9 cr. hrs.**

Advanced work in printmaking; relief, intaglio, planographic, serigraphic processes; related drawing and design considerations; parallel studies of graphic artists; care of equipment; tutorial relationship with instructor; extra class assignments, including minimum studio hours equal to class hours.

### **FAR 640 Graduate Studio in Sculpture — 3-9 cr. hrs.**

A general studio in advanced sculpture; utilizing additive, subtractive, and constructive methods; continued personal development in such media as clay, plaster, wood, stone, metal; tutorial relationship with instructor; extra class assignments including minimum studio hours equal to class hours.

### **FAR 690 Master's Project — 3 cr. hrs.**

A study undertaken by one or more individuals on a problem of special interest; aimed at making a special contribution to Fine Arts, as contrasted with normal or studio activity; may be presented, in part, as an exhibit of materials collected or prepared — including a major exhibit of art work related to study — with theories and findings reported in an acceptable form according to directions given by the Graduate Office.

## FOREIGN LANGUAGE

Offered by the Department of Foreign Language  
DR. NEIL H. RUDIN, Chairperson  
Room 325 Ketchum Hall

### **FRE 501 Seminar in French Prose: Selected Topics**

In-depth study of literary topics, analysis of representative works, with related research in cultural history and criticism. *Prerequisite:* Graduate status; undergraduate senior with B average or better in French upper division courses and permission of instructor, department chairman and Dean of Graduate Studies.

### **SPA 501 Seminar in Peninsular Literature: Selected Topics**

A treatment of a selected topic in depth, analysis of selected works, with readings in history, literary criticism. Research into specific problems. *Prerequisite:* graduate status; undergraduate senior with B average or better in Spanish upper division courses and permission of instructor, department chairman and Dean of Graduate Studies.

### **SPA 502 Seminar in Latin American Literature: Selected Topics**

A treatment of a selected topic in depth, analysis of selected works, with readings in history, literary criticism. Research into specific problems. *Prerequisite:* graduate status; undergraduate senior with B average or better in Spanish upper division courses or permission of instructor, department chairman and Dean of Graduate Studies.

## GENERAL SCIENCE

Offered by the Department of Geosciences,  
General Science & Physics  
DR. GERALD F. ACCURSO, Chairperson  
Room 260 New Science Building

### **SCI 521 Laboratory Techniques for Elementary School Teachers**

Appropriate laboratory exercises designed to acquaint the elementary teacher with the subject matter, laboratory equipment and techniques necessary to effectively introduce the new Elementary Science Programs.

### **SCI 527 Current Research in Science**

Study of current research in the various sciences; implications of such research for present and future living; implications of research in



science for the secondary school science curriculum. *Prerequisite:* Six semester hours in each of two sciences.

**SCI 540 Local Environmental Problems Seminar**

In depth discussions of environmental problems on the Niagara Frontier by local experts. This seminar is designed to supply current local environmental information to in-service science teachers and others concerned with the local environment.

**SCI 628 Seminar in Secondary Science Education**

Modern research in educational psychology and its application for science teaching; contemporary trends in science education; sociological and philosophical implications of science; recent research in science education; problems of individual students.

**SCI 629 Advance Seminar in Science Education**

An in depth exploration of problems and research in science education in areas selected by the students. *Prerequisite:* SCI 628 or permission of the instructor.

**SCI 631 Curricular Trends in Science Teaching in the Elementary School**

An activity-oriented course designed to examine recent curriculum developments in elementary school science. Within a workshop atmosphere students will work with elementary science curricular material in order to understand the philosophies, objectives, and historical events leading to the development of these programs; will develop and share practical classroom adaptations of these materials.

**SCI 632 Curricular Trends in Science Teaching in the Secondary School**

An examination of recent curriculum developments through a study of philosophies, objectives, and materials; current understandings of the psychology of inquiry; historical events leading to changes in curriculum. *Prerequisite:* One year of teaching science as a subject, or assignment in an administrative position having responsibility for science curriculum, or permission of the instructor.

**SCI 664 Teaching Science With Media**

A media course specifically designed for the specialized needs of science teachers. Utilization and workshop production of overhead projection transparencies, 35mm slides, super 8mm films, audio and video tapes, multi-media programs and calligraphy for the creative enhancement of visual communication in the science classroom.

**SCI 685 Evaluation in Science Education**

Philosophy of evaluation as applied to science education including historical development and rationale, different modes of evaluation and various techniques used in the practical application of the models. Examples and procedures will be directly related to science teaching.

**SCI 690 Master's Project**

A study undertaken by one or more individuals on a problem of special interest; must be submitted in acceptable form according to directions given by the Graduate Office.

**SCI 694 Research Methods and Techniques in Science Education**

Nature of Educational Research; Problem Analysis; Descriptive and Inferential Statistics; Experimental Design; Strategy of Historical, Descriptive and Experimental Studies. Computer Library programs will be used in statistical tests performed.

**SCI 795 Thesis**

An individual investigation of an original problem to be submitted in typewritten form according to directions given by the Graduate Office.

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**GEOGRAPHY**

Offered by the Department of Geography & Sociology  
DR. RAYMOND W. WAXMONSKY, Chairperson  
Room A213 New Classroom Building

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**GEG 500 Geography of Eastern Asia**

Physical and cultural geography of China, Japan, Korea, Mongolia, and the countries of Southeast Asia; emphasis on the major economies and their relationships to the natural environment.

**GEG 501 Studies in Economic Geography**

Study of man's major occupations and their relationships to the natural environment; emphasis on selected topics in agriculture, manufacturing, and mining that are of world-wide significance.



### **GEG 503 Studies in Resource Conservation**

Principles of natural resources conservation; selected problems in resource conservation, soil erosion, water pollution, destruction of forests, grasslands, and wildlife, flood control, and depletion of minerals; emphasis on conservation in the United States and New York State.

### **GEG 504 Studies in the Geography of Anglo-America**

Regional Divisions: landforms, climates, soils, natural vegetation, drainage, major economies; emphasis on the leading economies of each region and their relationships to the natural environment.

### **GEG 507 Map Reading and Analysis**

Map essentials; types of maps and symbols; techniques of map interpretation; classification and use of map projections; map collections.

### **GEG 508 Studies in the Geography of New York State**

The physical landscape; cultural geography and settlement; primary economic activities; urban systems and environments; planning and future development of the state.

### **GEG 550 Studies in Climatology**

Studies of climate classification systems; world macro-climatic regions; applied urban and non-urban aspects of energy and moisture balance micro-climatology. *Prerequisite:* Physical Geography or Meteorology.

### **GEG 602 Geography in the Secondary Schools**

Methods and techniques of teaching geography in the secondary schools with emphasis on the 9th grade level; elements of the natural and cultural environments that should be emphasized in secondary school geography; and the general geography of Eastern Asia, South and Southeast Asia, and Sub-saharan Africa.

### **GEG 610 Seminar**

Investigation, examination and discussion of topics of current interest in geography. Topics to be announced. *Prerequisite:* Twelve (12) hours of geography or permission of the instructor.

### **GEG 615 Geography of Industrial Location**

Analysis of industrial location in a free market economy with special reference to location within the United States; examination of the industrial location process and of the major factors affecting the location of industrial establishments in the real world.

### **GEG 620 Seminar in Urban-Metropolitan Area Problems**

Spatial aspects of urban-metropolitan area problems; urban land use; dynamics of change in urban areas; role of urban geography in finding solutions to urban problems. *Prerequisite:* Six hours of geography or three hours of urban sociology or urban affairs studies.

## **GEOSCIENCES**

Offered by the Department of Geosciences,  
General Science & Physics  
DR. GERALD F. ACCURSO, Chairperson  
Room 260 New Science Building

### **GES 502 The Restless Earth**

Study of the evidence for and history of continental drift, polar wandering and sea-floor spreading; the effect of such movements on ancient climates and the evolution of certain organisms. *Prerequisite:* GES 101 or equivalent.

### **GES 504 Field Investigations for Earth Science Teachers**

Planning field investigations for use in secondary teaching; considers investigations which can be accomplished in the immediate school vicinity as well as those which require a full day and travel. *Prerequisite:* prior experience or assignment to teach a secondary science course.

### **GES 506 Geology of New York State**

Physiography, stratigraphy, paleontology, glacial and economic geology of New York State; geologic history of the New York region; geology of selected recreational sites. Includes field trips. *Prerequisites:* GES 101 and either 102 or 502 or equivalents.

### **GES 508 Field Geology of Western New York**

A study of the evolution, stratigraphy, and surficial geology of Western New York through observation of selected field sites. *Prerequisite:* Introductory Geology or Historical Geology.

### **GES 535 Astronomy for Earth Science Teachers**

The dynamic universe: solar system, stars, galaxies and quasars. Night sky and planetarium observation. *Prerequisite:* Prior experience or assignment to a secondary science course.

### **GES 541 Meteorology for Earth Science Teachers**

A study of weather as a response to the unequal distribution of energy from the sun. Individualized to begin at the level of the student. Includes data collecting techniques, interpretation and predictions appropriate for secondary classes. *Prerequisite:* prior experience or assignment to a secondary science course.

### **GES 601 Economic Geology**

Origin, composition, alteration and enrichment of ores, origin of fossil fuels and other non-metalliferous deposits; conservation of geologic resources. *Prerequisite:* GES 304 and one year chemistry or equivalents.



#### **GES 605 Geosciences Seminar**

Readings, reports, and discussion of current geoscience problems and research. *Prerequisite:* 6 semesters of geosciences. Lecture and laboratory; occasional field trips.

#### **GES 606 Advanced Invertebrate Paleontology**

Methods and techniques used in the identification and classification of selected fossil invertebrate groups. *Prerequisite:* GES 302 or equivalent.

#### **GES 607 Regional Geomorphology of the United States**

Detailed study of the factors and forces which led to the development of the surface features of selected areas of the U.S. *Prerequisite:* GES 307 or equivalent.

#### **GES 609 Igneous and Metamorphic Petrology**

The petrogenesis of igneous and metamorphic rocks and their relation to the evolution of the earth. *Prerequisite:* GES 304 or equivalent.

#### **GES 639 Topics in Modern Astronomy**

The expanding universe, primeval fireball, quasars, missing mass in the universe, black holes, pulsars, neutron stars, origin of the elements. Emphasis on current research after review of the appropriate background material. *Prerequisite:* GES 131 or 535 or equivalent.

#### **GES 690 Master's Project**

A study undertaken by one or more individuals on a problem of special interest; must be submitted in acceptable form according to directions given by the Graduate Office.

#### **GES 795 Research Thesis in Geosciences**

An individual investigation of an original problem to be submitted in typewritten form according to directions given by the Graduate Office.

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### **HEALTH, PHYSICAL EDUCATION & RECREATION**

Offered by the Department of Health,  
Physical Education & Recreation  
DR. FLORENCE M. HULETT, Chairperson  
Room 203 New Gymnasium

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#### **HSC 500 Workshop on Smoking and Health**

A workshop designed for teachers, supervisors and other personnel concerned with individual and community health problems. Emphasis is placed upon development of an understanding of the widespread effects of smoking, its relationship to health and disease, and the implications and application for health teaching.

#### **HSC 510 New York State Summer Institute on Alcohol Problems**

An institute designed for teachers, supervisors and voluntary and governmental agency personnel concerned with individual and community health problems. Emphasis is placed upon development of an understanding of the widespread effects of alcohol, its relationship to health and disease, and the implication and application for health teaching and therapy.

#### **HSC 520 Drugs, Society, and Health**

An advanced course dealing with the multidisciplinary aspects of Drug Use and Abuse. Informational and experiential opportunities will be provided for the student interested in the Drug Problem from either a personal or professional viewpoint. Considerable individual latitude will be granted to class participants in selection of topics for investigation and in self-evaluation related to both licit and illicit drugs.

#### **HPR 530 Physical Education and Recreation for the Disabled Child**

Psychological, physiological, sociological, and motoric characteristics of the disabled child; modification of physical education and recreation activities; planning the physical education and recreation programs. The course is to be keyed to lab work with children in the College Learning Lab.

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### **HISTORY**

Offered by the Department of History  
& Social Studies Education  
DR. E. O. SMITH, Interim Chairperson  
Room 205B New Classroom Building

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#### **HIS 500 Studies in American History**

Aspects of American life; significant trends, policies, and ideas in politics, diplomacy, and national culture; topics for study dictated by student needs and interests.

#### **HIS 501 Studies in Twentieth Century European History**

Study of a central theme selected by instructor and class, such as: modern political ideologies; international relations; individual country, region or period.

#### **HIS 603 Social and Intellectual History of the United States**

Social roots of systems of thought; effect of ideas upon American society; continuing patterns of thought, such as Puritanism, liberalism, democracy; contributions of intellectual leaders.



#### **HIS 604 History of the American Frontier**

Westward movement of settlement in terms of trader-trapper, farmer, cattle and mining frontiers; analysis of myth and interpretations, with emphasis upon the edenic and heroic conceptions in contemporary accounts, both fiction and non-fiction.

#### **HIS 605 Studies in American Colonial History**

Comparison of colonial policies pursued by European powers in the New World; modification in a new environment of such transplanted elements as the family, church, schools, economy, and government.

#### **HIS 606 Problems in British History**

An examination of major constitutional, political, social and intellectual factors which shaped England during one of the following periods: (1) Medieval England; (2) Tudor Stuart; (3) eighteenth century; (4) Victorian; (5) twentieth century.

#### **HIS 607 The United States in Contemporary World Affairs**

United States foreign policy; United States and the United Nations; Atlantic and Pacific commitments; internal problems such as defense, production, inflation, and taxation.

#### **HIS 608 Reform and Reformers in American Civilization**

Economic and social *Milieu* creating need for reform; personality characteristics of reform leaders; structure and operations of reform movements; selected reform movements and periods of widely-sponsored reform sentiment; changes wrought in American society.

#### **HIS 609 History of Russian Diplomacy**

Problems of Russian and Soviet foreign policy, with special emphasis on the post-revolutionary period.

#### **HIS 610 Black American History**

Slavery, Northern free blacks, American racial thought, from Colonial era to Civil War; Northern blacks and the Civil War; black thought during Reconstruction and post-Reconstruction eras; "Black Reconstruction," problems of American blacks from 1895 to World War II; leadership, urban migration; 20th century black thought; American segregationist thought.

#### **HIS 612 American Foreign Policy in the Far East**

The concept of the United States as a Pacific power; American reaction to European penetration of China; the Open Door Policy and Dollar Diplomacy; American initiative in opening of Japan; World War I and Disarmament, the road to Pearl Harbor; World War II and American "Containment" Policy; the Korean War and American security pact system in the Pacific; War and Peace in Southeast Asia; examination (evaluation) of the Nixon Doctrine in the Pacific.

#### **HIS 613 Latin America in the 20th Century**

Social and political conditions in Latin America in the early 20th century, the Latin American economies and the industrial world, nationalism, reform, and revolution (1900-1945); economic, political, and international problems (from World War II to Castro); major issues in Latin America today; the United States and Latin America.

#### **HIS 615 Modern European Political Movements**

Function, structure, behavior, and ideological basis of major European political movements since the turn of the 20th century.

#### **HIS 617 Modern European Imperialism and Colonialism**

Historical theories and social science; theories of imperialism; origins of World War I as test case of theories; colonialism in Africa, Asia, and Oceania; Colonialism in the New World; breakup of the colonial empires.

#### **HIS 618 Strangers in the Land; 20th Century Immigrants in the United States**

The role of the United States in world population movements during the 20th century; shifts in governmental policy; major groups of 20th century immigrants; how and why they came; patterns of settlement; American nativism; assimilation and alienation of immigrants.

#### **HIS 700 Seminar in the Bibliography of American History**

Sources, monographs and general histories in the bibliography of American history; collections of historical materials; historical organizations and services; analysis of selected topics and authors.

#### **HIS 701 Seminar in the Bibliography of European History**

Sources, monographs, and general histories in the historical bibliography of selected European countries; collections of historical materials; historical organizations; problems of research; analysis of selected topics and authors.

#### **HIS 702 Seminar in Modern Russian History**

Research in the problems of the Soviet Union, from the establishment of Marxism on Russian soil to the present, emphasizing ideological problems and Russian foreign policy, particularly toward Europe.

#### **HIS 703 Seminar in Modern East Central European History**

Research in the problems of the nations located between Russia and Germany, and between the Baltic Sea and Turkey, from the middle of the nineteenth century to the present with special emphasis on ideological conflicts and foreign policy.

#### **HIS 709 Local History: Research Methods and Techniques**

Preparation of individual research papers on some undeveloped aspect of local history; guidance in historical research and writing techniques.



### **HIS 711 Seminar in American History**

Problems in American social, intellectual, or diplomatic history as determined by student needs and staff; historical methodology, the philosophy of history and historical writing; individual projects and seminar discussion.

### **HIS 795 Thesis**

An individual investigation of an original problem to be submitted in typewritten form according to directions given by the Graduate Office.

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## **HOME ECONOMICS EDUCATION**

Offered by the Department of Consumer Studies  
& Home Economics

DORRIS M. CLOSS, Interim Chairperson  
Room 206 Caudell Hall

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### **HEE 501 Trends in Teaching Home Economics**

New directions, problems in home economics education explored based upon needs and interests of students. Consultants; field trips; group discussion among students, educators.

### **HEE 515 Home Economics Education for Adults**

Recent developments in home economics education for adults.

### **HEE 521 Curriculum Planning in Home Economics**

Opportunities to review planning, development, evaluation of curriculum in home economics education. Investigation of recent curriculum pattern changes: HELPS, HEEPS, programmed learning modules.

### **HEE 600 Seminar in Home Economics Education**

Recent research, curriculum problems in home economics; selected individual and/or school curricular problems investigated through action research culminating with research reports.

### **HEE 602 Leadership in Home Economics Supervision**

Consideration of the development of home economists for leadership positions in education and in related areas within the profession including principles of supervision, role of the supervisor related to leadership, human relations and evaluation.

### **HEE 607 Evaluation in Home Economics Education**

Techniques for identifying and appraising progress toward goals in home economics; methods of teaching appropriate to the achievements of these objectives; individual work on problems of evaluation.

### **HEE 617 Seminar Role of the Urban Home Economist**

Problems of urban families, educational groups and agencies working together in the city; roles, sub-cultural patterns, economic, social, religious, political, personal value structures, which affect the performance of the urban home economist. *Prerequisite:* One of the following: HEE 417, SOC 501, SOC 506, or teaching its professional equivalent in the urban setting, or permission of the instructor.

### **HEE 690 Master's Project**

An undertaking engaged in by one or more students related to the area of special interests. The study must be planned cooperatively and approved by a member of the Home Economics Graduate Faculty.

### **HEE 695 Thesis**

Individual investigation of an original problem to be submitted in typewritten form according to directions given by the Graduate Office.

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## **INDUSTRIAL ARTS EDUCATION**

Offered by the Department of Industrial Arts  
& Vocational Education

DR. TERRENCE J. TRUDEAU, Chairperson  
Room 312 Upton Hall

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### **IAE 501 Industrial Arts in the Elementary School**

Opportunities for classroom teachers to promote and develop ideas for their own situations; planning, organizing and constructing activities for the elementary school; use of a variety of materials, development of IA in the elementary school and the changing industrial and technological process and their effect upon society. Not for IA majors.

### **IAE 502 Field Studies Related to Industrial Arts Education**

Individual and group studies of industrial activities in the Niagara Frontier; the woodworking and fabrication trades; metal industries; plastic and fibre products; graphic arts; electrical, ceramic, airplane and automotive manufacturer; conferences with representatives of industry and labor organizations.

### **IAE 505 Creative Arts for Mentally Retarded Children**

Wide range of guided exploratory experiences which relate to industry,



business, the home, and leisure time. Emphasis placed on planning activities which are commensurate to the ability of the handicapped child. Analyzing jobs and tasks; identifying teaching methods and techniques; reviewing instructional resources; evaluating the work potential of the handicapped; and the study of the relationship of the handicapped to the world of work. *Prerequisites:* None. This course is not available to Industrial Arts majors.

#### **IAE 507 Industrial Arts Facility Planning and Management**

Problems involved in planning new industrial arts facilities or the remodeling of existing laboratories; concepts in relationship of objectives to facilities; space allocation, area development and organization, service requirement, criteria for selection and placement of equipment, analyzing available equipment and writing specifications, actual experience in evaluating an existing Industrial Arts laboratory and in proposing improvements.

#### **IAE 513 Industrial Ceramics**

A breadth course, general review and familiarization with the total field of the ceramics industries will be developed through class discussions and manipulative experiences with each material. Persons wishing to take IA 613, but not able to meet the prerequisites should take this course. *Prerequisite:* IAE 206 and laboratory chemistry or similar courses with appropriate background preferred.

#### **IAE 520 New Techniques and Materials in Forest Products Industry**

Consideration given to design, application, and use of power equipment; preparation and treatment of wood; exploration of adhesives, abrasives, and finishes; experiences in lamination and pattern-making; introduction to house construction; application of new techniques and materials in wood to our culture. *Prerequisite:* IAE 102 or IAE 352.

#### **IAE 521 Occupational and Practical Arts Education for Student with Special Needs**

A study of the handicapped and disadvantaged enrolled in occupational and practical arts education program: e.g., nature and needs of the handicapped and disadvantaged; curriculum development; evaluating work potential; identifying instructional resources and teaching methods and techniques; interpreting research; and identifying the function of vocational rehabilitation and occupational and practical arts education programs available to the handicapped and disadvantaged. *Prerequisite:* for majors in Home Economics, Industrial Arts, Vocational Technical, Exceptional Education or permission of instructor.

#### **IAE 526 Occupational Awareness**

A field course designed to increase educator's occupational awareness

as based on the fifteen U.S. Office of Education career clusters. Students attend sessions wherein cluster representatives of business, industry, and labor organizations discuss work environment, obtaining employment, employer and employee job expectations, economic benefits, and skills required.

#### **IAE 531 Elements of Manufacturing Technology**

A study of the manufacturing technology systems; management, personnel, and production, for the purpose of organizing and implementing this subject matter as a conceptually based multi-material activity centered approach to industrial arts education.

#### **IAE 540 Career Awareness in Technology for the Elementary School**

Current developments in career education; the role of the elementary school in career education; curriculum development and correlation techniques. *Prerequisite:* None. *Classification:* Elective-all college.

#### **IAE 600 Foundations in Industrial Arts**

European and American antecedents of Industrial Arts; social and technological factors that make the Industrial Arts a major condition of culture; psychological and philosophical basis for teaching Industrial Arts. Required of IA Majors.

#### **IAE 601 Research Seminar in Industrial Arts**

Problems and techniques concerning administration and supervision of elementary, secondary, and adult programs in industrial arts education at the federal, state, and local levels. Required of IA Majors.

#### **IAE 608 Metallic Fusion and Joining Technology**

An intensive course for students interested in the improvement of technical skills in welding, using the latest equipment and knowledge. Use of both gas and electric welding equipment required. Study of the latest research into welding applications in industry will be made.

#### **IAE 612 Plastics Technology**

This course is designed to aid the development of those who have had some contact with plastics, and who wish to expand their depth and breadth of knowledge in plastics, for instruction in public schools.

#### **IAE 613 Ceramics Technology**

A detailed investigation of Ceramics Technology with emphasis on research, individual needs and problems, and competency. A technical laboratory course for all ceramic materials, products, and processes. Course content applicable to all levels of education. *Prerequisite:* IAE 206 or IAE 513 and chemistry (laboratory type preferred)

#### **IAE 615 Power Technology**

Principles of operation, design, function of power systems employing various types of engines; mechanisms involved in the development,



transmission and control of power with emphasis on dynamic analysis of specific units and their application.

#### **IAE 617 Electronics**

Electronics in the junior and senior high school Industrial Arts program; advanced electronic theory and practice in communications; development of instructional materials, demonstration equipment, projects, and visual aids. *Prerequisite:* IAE 408.

#### **IAE 618 Electronics**

Advanced study in circuit analysis of instruments; familiarization with electronic instruments, their operation, and application. *Prerequisite:* IAE 408.

#### **IAE 620 The Forest Products Industry**

Processes and procedures involved in the derivation of chemicals, solvents, human consumption goods and other by-products from the tree; research and experimentation to interpret industrial processes; application of bending, laminating, veneering, inlaying and production techniques; development of teaching materials to improve classroom presentations.

#### **IAE 621 New Methods and Techniques in Metal Technology**

Primarily a research seminar involving investigation of recent and current experimental developments in metalworking knowledge; securing of data from primary sources, abstracts, and actual contact with the developing laboratories or industries; laboratory facilities available for original development or experimentation on part of the student.

#### **IAE 623 Industrial Arts for the Elementary School**

Understanding the role of the industrial arts consultant; gain increased proficiency in teaching children to work with tools and materials; child nature and growth, his potency of experience; understanding the relationships of industrial arts to the elementary school; develop the ability to administer a program of elementary industrial arts.

#### **IAE 628 Curriculum Development in Industrial Arts**

Philosophical foundation of Industrial Arts; current social, economic, and technological conditions; curriculum patterns and curriculum controls; course of study construction; approaches to teaching; programs, structure and evaluation. Required of IA majors; *Prerequisite:* IAE 600.

#### **IAE 629 Drafting — Problems and Techniques**

Proficiency in specific areas of technical drawing; the program of technical drawing in the junior and senior high schools; governmental and industrial drafting standards; conventional and simplified drafting practices; evaluation of pupil progress in technical drawing.

#### **IAE 630 Graphic Arts**

Updating content and methodology of graphic arts education as an area of industrial arts; activities and presentations emphasizing innovations

brought about by recent developments in industry; instruction in techniques of copy preparation for reproduction, general, technical and graphic arts photography, current methods of stripping and platemaking, principles of offset lithographic presswork for junior and senior high industrial arts. *Prerequisite:* IAE 402.

#### **IAE 634 Evaluation in Industrial Arts**

General principles of evaluation; construction and use of objective tests, informal devices and techniques of evaluation applicable to Industrial Arts; selection, construction, and use of appropriate instruments of evaluation; observation, rating scales, anecdotal records, personnel systems, and the Industrial Arts project; interpreting, recording and using the results of evaluation for the improvement of instruction. Required of IA majors. *Prerequisite:* IAE 601, IAE 628.

#### **IAE 635 Supervision of Industrial Arts Student Teachers**

Intensive study of the professional role of the public school teacher who supervises industrial arts student teachers; provides opportunity to develop video tapes, type scripts and other related supervisory instruments; students will develop specific supervisory skills as appropriate to the supervision of student teachers. *Prerequisite:* 15 semester hours of graduate study and 2 years of teaching experience.

#### **IAE 690 Master's Project (3 sem. hrs.)**

A study undertaken by one or more individuals on a problem of special interest; must be submitted in acceptable form according to directions given by the Graduate Office. *Prerequisite:* IAE 600, 601, 624, 628.

#### **IAE 695 Thesis**

An individual investigation of an original problem to be submitted in typewritten form according to directions given by the Graduate Office. The problem and procedure must be approved by: the student's Graduate Advisor, the Graduate Advisory Committee, and the Division Director, before the investigation is begun. *Prerequisite:* IAE 600, 601, 624, 628.

#### **IAE 701 Seminar in Industrial Arts Writing and Publishing**

A seminar for those with a genuine desire and ability to express ideas in written form. An opportunity to learn the mechanics of writing and getting it published.

#### **IAE 702 Seminar in the Philosophy of Technology**

A critical examination of "Technology" in historical perspective, and a study of prevalent views and issues relative to technology; its meaning, its characteristics; its interdisciplinary scope; its relation to science, its place in education.

#### **IAE 703 Seminar in the Development of Instructional Materials**

A seminar for those with a genuine desire to develop and organize



teaching materials. An opportunity to maximize the effectiveness of the instructional program and its resultant benefits.

**IAE 705 Career Exploration in Technology for the Middle School**

A course centered upon student-teacher planning in career education for the middle school. Curriculum development articulation methodology, developing instructional units of study for computer-based resource units, will be utilized to accomplish course objectives. *Classification:* Elective-all college.

**IAE 706 Career Development in Technology for the Secondary School**

Analyzes career education in terms of its evolution and potentiality for adolescents; provides opportunities for participants to develop occupational cluster information banks including instructional objectives, content, media, learning activities, and evaluation devices. *Classification:* Elective-all college.

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## MATHEMATICS

Offered by the Department of Mathematics  
DR. WILLIAM T. BAILEY, Chairperson  
Room 308 Bishop Hall

The 500 level courses are, in general, for students in elementary or exceptional children education or electives.

All 600 level courses and 700 level courses are, in general, designed for students earning degrees in mathematics or science or students with a concentration in mathematics. (See prerequisites for each course with course descriptions.)

**MAT 501 Mathematics for Elementary Teachers: Selected Topics from Modern Algebra**

Equivalence; congruences; Boolean algebra; groups, rings, integral domain and fields; matrices. *Prerequisite:* MAT 121 and 122 or equivalents.

**MAT 521 Mathematics for Elementary Teachers: Geometry**

Formal and informal geometry; nonmetric geometry; congruence; measurement; constructions; similarity, coordinate geometry; trigonometric functions, constructions.

**MTH 552 Mathematics for Elementary Teachers: Number Theory**

A study of the structure of the integers, divisibility, primes, congruence classes, linear congruences, diophantine equations. Fibonacci numbers

and selected topics. Some topics will be developed and adapted by the students for the elementary classroom.

**MAT 581 Mathematics for Elementary Teachers: Probability and Statistics**

Organizations and analysis of data; elementary probability; probability distributions; sampling; decision-making; regression and correlation. Many topics are to be presented using ideas that can be adapted for the elementary classroom. *Prerequisite:* MAT 121 and 122 or equivalents.

**MAT 593 Mathematics for Elementary Teachers: Finite Mathematics**

Partitions; permutations; probability measure; conditional probability; vectors; matrices; operations and properties; linear programming; applications. *Prerequisite:* MAT 121 and 122 or equivalents.

**MAT 603 Theory of Matrices**

The algebra of matrices and determinants; equivalence, similarity and congruence relations on matrices; vector spaces, linear transformations; characteristic roots and vectors; application. *Prerequisite:* 12 semester hours of Math beyond the Calculus.

**MAT 615 Lebesgue Integration**

Introduction to Lebesgue measure and integration in  $R^n$ , measurable sets and measurable functions, sets of measure zero, convergence in measure, limit properties of Lebesgue integrable functions, Fubini's theorem,  $L_p$  spaces, Riesz-Fischer Theorem. *Prerequisite:* MAT 301 and MAT 417.

**MAT 620 Modern Geometry: Selected Topics**

The topics will be selected from the following list. Foundations, Axiomatic Projective Geometry, Real Projective Geometry, Linear Projective Geometry, Real Projective Geometry, Linear Geometries, Finite Geometries, Non Euclidean Geometries. *Prerequisite:* MAT 322 or equivalent.

**MAT 631 Foundations of Mathematics**

The axiomatic methods; theory of sets and infinite sets; real number system and linear continuum; the complex number system; groups and their significance for the foundations; development of various viewpoints on foundations. *Prerequisite:* 12 semester hours of Math beyond the Calculus.

**MAT 635 Mathematical Logic**

Statement calculus; predicate calculus; formal theories; decidability; completeness; consistency. *Note:* 12 semester hours of Math beyond the Calculus to include MAT 301, 302 or 202 or equivalent.

**MAT 651 Theory of Numbers**

Counting and recording of numbers; properties of numbers; Euclid's



algorithm; prime numbers; the aliquot parts; indeterminate problems and their theory; Diophantine problems; congruences; analysis of congruences; Wilson's theorem; Euler's theorem; theory of decimal expansions; the converse of Fermat's theorem; the classical construction problems. *Prerequisite:* 12 semester hours of Math. beyond the Calculus.

#### **MAT 681 Intermediate Probability**

A consideration of selected topics which are more advanced than the introductory treatment of probability theory, such as problems of combinatorial analysis, the laws of large numbers, and the theory of stochastic processes. *Prerequisite:* MAT 381 Probability or equivalent.

#### **MAT 683 Statistical Theory**

Probability, estimation, confidence sets, tests of hypotheses, decision theory, Bayesian methods, linear models and nonparametric methods. *Prerequisite:* MAT 381 Probability, or equivalent.

#### **MAT 690 Master's Project**

A research study or an investigation of a mathematical problem or topic under the guidance of a qualified member of the graduate faculty. Written approval by the faculty member and the Chairperson of the Department is necessary before registration is permitted.

#### **MAT 696 History of Mathematics**

Chronological study of the development of elementary mathematics; contributions of nations, ages or periods; selected biographies; appraisals and critiques; problem studies. *Prerequisite:* 12 semester hours of Math. beyond the Calculus.

#### **MAT 701 Modern Algebra I**

Cyclic groups; transformation groups; factor groups; groups with operators; isomorphism theorems; composition series; direct products of groups; Sylow theorems; residue class rings; operations on ideals; extensions of rings. *Prerequisite:* MAT 301 or equivalent.

#### **MAT 702 Modern Algebra II**

Rings, integral domains, fields, modules, finitely-generated modules, free modules, simple and semi-simple modules. Decomposition Theorem for semi-simple modules, applications to vector spaces, dual module, solutions of differential equations, matrices for free modules, introduction to homological algebra. *Prerequisite:* MAT 701 Modern Algebra I.

#### **MAT 711 Analysis I**

Introduction to graduate functions of several variables, topology of Euclidean space, continuity and uniform continuity, convergence and uniform convergence of sequences of functions partial differentiation, chain rule, implicit functions theorems. Riemann-Stieltjes integration, multiple integrals, Fubini's theorem. Line integrals. *Prerequisite:* MAT 417 Intro. to Real Analysis I.

#### **MAT 712 Analysis II**

Introduction to complex analysis; geometry of the complex numbers, functions of a complex variable, Cauchy-Riemann equations, inverse functions, holomorphic functions, power series, analytic continuation. Maximum Modulus theorem, conformality, inverse mappings, complex line integrals, Cauchy's theorem, L'Ouville's Theorem. Jordan Curve Theorem, evaluation residues, improper integrals. *Prerequisite:* MAT 711 Analysis I.

#### **MAT 771 Topology**

Topological spaces; bases and subbases; subspaces; continuous functions; product spaces; separation and countability; Urysohn's Lemma; Tietz, extension Theorem; compactness; metrizability; connectedness; locally compact spaces and compactification.

#### **MAT 795 Master's Thesis**

An individual investigation into an area of mathematics under the guidance of a faculty member.

### **MATHEMATICS EDUCATION COURSES**

#### **MED 595 Research Methods and Techniques in Mathematics Education**

Nature of Educational Research; Problem Analysis; Descriptive and Inferential Statistics; Experimental Design; Strategy of Historical, Descriptive and Experimental Studies. *Prerequisite:* Nine semester hours of graduate mathematics beyond baccalaureate degree.

#### **MED 600 Contemporary Mathematics Curriculum Developments**

Study of contemporary mathematics curricular developments in the USA and in selected countries and the forces which shape these developments. The historical background influencing current curricular developments. Mathematics curricula as it affects school and society or is affected by school and society.

#### **MED 601 Seminar in Teaching of Mathematics**

An exploration of a variety of techniques and content ideas for teaching mathematics.

#### **MED 602 Mathematics for the Secondary School Teacher: Selected Topics**

This course will be the study of one or more topics in mathematics relevant to the secondary mathematics curriculum. Topics will be announced in advance. *Prerequisite:* Permission of the instructor.

#### **MED 690 Master's Project (1-4 S.H.)**

#### **MED 795 Thesis in Mathematics Education (6 S.H.)**



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## MUSIC

Offered by the Department of Performing Arts  
PAUL R. HOMER, Interim Chairperson  
Room 201 Albright Hall

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### MUS 500 Music in Education

A practical course with a variety of musical experiences to develop musical skills and knowledge of the basic fundamentals. Demonstration lessons, and workshops presenting teaching techniques. Intended for classroom teachers, exceptional education, and music teachers. Not for students who have had MUS 317 or MUS 404.

### MUS 504 Introduction to Symphonic Literature

The art of enjoying symphony orchestra music; the understanding of the masterpieces of Classic, Romantic and Contemporary composers; attendance at selected concerts. *Classification:* Elective.

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## NUTRITION & FOOD SCIENCE

Offered by the Department of Nutrition  
and Food Science  
MARY K. DIENST, Chairperson  
Room 106-A Caudell Hall

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### NFS 604 Trends and Research in Foods

Recent research and trends in food technology. Emphasis on the application of scientific principles of foods used in teacher education. (Home Economics Graduate majors).

### NFS 605 Recent Advances in Nutrition

Review of the principles of nutrition. Current trends and research in Nutrition Education, and emphasis on application of nutrition information to specific problems of individual and society. (Home Economics Graduate majors).

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## PHILOSOPHY

Offered by the Department of Philosophy  
& Religious Studies  
DR. RONALD E. ROBLIN, Chairperson  
Room 301 Chase Hall

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### PHI 525 Philosophy of Creativity

An attempt to understand whether creative inference can be identified. By analytical clarification of the main features observed in what has been accepted as creative statements or acts, an attempt will be made to demonstrate these human achievements as a by-product of disciplined intelligence. Disciplined intelligence will be shown to be intelligence which is freed for use (either theoretical or practical).

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## PHYSICS

Offered by the Department of Geosciences,  
General Science & Physics  
DR. GERALD F. ACCURSO, Chairperson  
Room 260 New Science Building

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### PHY 510 Physics Laboratory Instruction

Selected experiences involving both new and classical techniques in laboratory and demonstration instruction in Physics and General Science.

### PHY 520 Modern Physics Concepts

Introduction for the science-oriented major to theory and application of selected topics in modern physics.

### PHY 525 Nuclear Physics Concepts

An introduction to topics involving the concepts and phenomena associated with modern nuclear physics and its applications.

### PHY 690 Master's Project

A study undertaken by one or more individuals on a problem of special interest; the problem must be approved by the Graduate Committee of the Department of Physics before the project is begun; a report on the project must be submitted in acceptable form according to directions given by the Graduate Office.

### PHY 795 Research Thesis in Physics

An individual investigation of an original problem to be submitted in typewritten form according to directions given by the Graduate Office. The problem and procedure must be approved by the Graduate Committee of the Department of Physics before the investigation is begun.



## POLITICAL SCIENCE

Offered by the Department of Economics  
& Political Science

DR. RAM DESAI, Interim Chairperson  
Room B218 New Classroom Building

### PSC 605 Contemporary Africa and Asia

An examination of the dimensions, dilemmas, and directions of the emerging African and Asian states, examples of interaction with the Western world; discussion of the social and economic changes underway.

### PSC 606 International Relations

Topics such as international organization, international law, regionalism, economic development, role of ideologies, or relationship of domestic and international politics.

### PSC 607 American Constitution and Politics

Foundations of American constitutionalism and the politics of the Constitution; federalism, separation of powers, and role of the states.

### PSC 610 Black Politics and Ideology

Examination of Black political and social thought in America, the West Indies, and Africa, with major emphasis upon the U.S.A.

### PSC 611 Urban Politics and Administration

A survey of political behavior and governmental administrative practices in urban areas of the U.S. and abroad. Particular attention is given to historical and contemporary problems in the inner-city and to "solutions" proposed by planners, administrators, and client groups.

### PSC 612 Studies in Non-Western Cultures: The Middle East

An area study of characteristic cultural features of the countries; examples of interaction with Western world; cultural and social changes underway; examples of problems typical of the underdeveloped nations in the world today.

### PSC 690 Master's Project

Research or investigation of a particular problem; to be planned and carried out by student, with consultation and guidance from instructor.

## SAFETY STUDIES

Offered by the Department of Technology  
& Business Studies

DR. MYRON E. LEWIS, Chairperson  
Room 502 Upton Hall

### SAF 564 Advanced Driver Education and Safety (3 credits)

Course designed to serve the needs of the practicing Driver Education Teacher. Evaluation of teaching methods and materials, survey and evaluation of research studies, practice driving analysis, diagnostic testing, techniques for improving practice driving instruction, public relations, motorcycle and bicycle program development. *Prerequisite:* SAF 417 and SAF 426.

### SAF 565 Trends and Problems in Driver and Traffic Safety Education (2 credits)

Teaching administration and supervision of driver education and traffic safety programs, methods and materials of instruction, resource people and agencies, critical analysis of existing procedures, discussion of problems, research findings, field trips, guest lecturers from related specialized areas. *Prerequisite:* SAF 417 and SAF 426, and must have experience in teaching secondary school driver education. *Special note:* Required to obtain permanent approval as a Driver Education Instructor.

### Pre-service courses in Driver Education

Teachers seeking provisional approval as secondary school driver education teachers must first complete the two undergraduate courses: Driver Education I (SAF 417) and Driver Education II (SAF 426). Graduate students are welcome in these courses.

## SOCIAL STUDIES EDUCATION

Offered by the Department of History &  
Social Studies Education

DR. E. O. SMITH, Interim Chairperson  
Room 205B New Classroom Building

### SSE 502 Teaching Social Studies

Nature of the social studies, its content and methodology. Survey of trends in curriculum, evaluation and instructional resources.

### SSE 513 Seminar in Secondary Social Studies

The introductory course for secondary social studies graduate



students. A review of the literature and curriculum of the social studies. Deals with philosophical, historical, sociological aspects of the social studies. Required for all social studies students.

**SSE 595 Research Methods in Secondary Social Studies**

The development of research problems, resources for and the tools of educational research, and preparation of a research paper. Assessment of national curriculum projects. Required of all social studies students.

**SSE 610 The Study of Peace and War in the Secondary School**

A number of possible approaches for achieving peace have been proposed by scholars in recent years, and a significant number of materials for presenting these approaches and the more traditional ones have been published. The course will introduce the student to these issues and materials and offer some strategies for teaching them and some criteria for judging them. The teaching of a unit on peace at a site chosen by the student or instructor will be required.

**SSE 655 Laboratory Experiences With Social Studies Material**

This course will provide the social studies teacher the opportunity to interact with fellow professionals in developing their skills to design, implement and evaluate curriculum materials as required by newer approaches to the social studies.

**SSE 670 Experiences in Simulation and Role-Playing for the Social Studies Teacher**

This course is designed to provide the secondary social studies teacher opportunities for in-depth investigation of the techniques of simulation and role-playing. Emphasis will be placed on creating models of social situations and translating them into dynamic simulation and role-playing episodes. To be taken after or concurrently with SSE 513.

**SSE 685 Planning for Educational Change**

Perspectives on planned educational change: models of change, innovations, and adopters, change agent roles, change strategies and techniques, information networks. The student will devise a plan for introducing an innovation in an educational setting.

**SSE 730 Practicum: Innovations in the Social Studies**

Practical experiences in identifying, selecting and field testing curricular and instructional innovations in secondary social studies. Required for all degree students.

**SSE 795 Thesis**

An individual investigation of an original problem to be submitted according to directions given by the Graduate Office.

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## SOCIOLOGY

Offered by the Department of Geography & Sociology  
DR. RAYMOND W. WAXMONSKY, Chairperson  
Room A213 New Classroom Building

**SOC 501 Contemporary Social Problems**

Problem areas of American society; sources of information; techniques for discovering and analyzing social problems; analysis of several major problems, selected in accordance with student needs and interests. *Prerequisite:* SOC 101.

**SOC 505 Technology, Society, and Self**

Examination of the sociohistorical development of rationalism and technology. Assessing the effects of technology upon modern social institutions, and how technology contributes to many modern urban-industrial social problems. Special attention given to the direct and indirect effects of rationalism and technology upon the individual's social consciousness, social behavior, and life style. *Prerequisite:* SOC 101.

**SOC 506 Minority Groups in American Culture**

Major racial, nationality, and religious minority groups in America treated from the cultural, historical, and familial point of view; current anthropological and psychological data on uniformities, differences, prejudices, and discrimination. *Prerequisite:* SOC 101.

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## VOCATIONAL TECHNICAL EDUCATION

Offered by the Department of Industrial Arts  
& Vocational Education  
DR. TERENCE J. TRUDEAU, Chairperson  
Room 312 Upton Hall

**VTE 530 Career Education: Rationale, Nature and Concepts**

An in-depth exploration of career education concepts, terminology and models for elementary school through college. An analysis of present programs, research and current thinking on career education.

**VTE 536 Contemporary Methodology**

An examination of new and emerging techniques of instruction and the application to specific individual problems; development by students of models appropriate to their particular subject area and the nature of the student body.



## **CERTIFICATION COURSES FOR COORDINATORS OF DIVERSIFIED WORK-STUDY PROGRAMS**

**Qualifications:** Candidates for certification as a Coordinator must hold a teaching certificate in an occupational subject or industrial arts and complete VTE 550 and 555. Others may take these courses but will be unable to qualify for certification.

### **VTE 550 Organization of Diversified Cooperative Work-Study Programs**

Provides information for industrial arts or occupational teachers and department chairmen or supervisors interested in establishing diversified cooperative programs. Included are procedures for promoting a new program, working with advisory boards, developing employment opportunities, arranging trainee outlines, planning instructional facilities and securing Regents accreditation.

### **VTE 555 Operation of Diversified Cooperative Work-Study Programs**

A course for those interested in conducting effective instruction in diversified cooperative programs, including how to interview employers, supervise trainees, interpret legal aspects, prepare records and reports, and conduct classes in related theory.

### **VTE 600 Contemporary Issues in Occupational Education**

A survey course intended to familiarize the graduate student in occupational education with some of the most current issues, practices, policies, and literature in and about occupational education.

### **VTE 601 Supervision of Vocational Education**

Nature and scope of supervision; surveying, analyzing needs and facilities; planning, initiating, and maintaining supervisory programs; evaluating procedures and outcomes, trends in occupational education.

### **VTE 602 Administration of Vocational Education**

Nature and scope of administering vocational technical programs including curriculum, integration with industry, evaluation, community relationships, advisory board development, state and national relationships.

### **VTE 603 Selected Topics in the Organization, Administration and Supervision of Vocational Technical Education**

Problems arising in the organization, administration, and supervision of vocational technical education.

### **VTE 604 Technical Project**

An internship experience with industry or business to study new tech-

niques, operations and processes; cooperatively initiated by faculty and student and requiring the development of instructional material reflecting the new knowledge and skills gained.

### **VTE 605 Occupational Guidance for Career Exploration**

A course specifically designed to acquaint occupational educators with those techniques and procedures of vocational guidance which may be effectively employed in career counseling for a changing world of work.

### **VTE 606 History and Philosophy of Occupational Education**

A historical review of the philosophical, sociological, economic, and political indices which have influenced the development of vocational technical education.

### **VTE 620 Structure of Occupational Programs**

An examination of the structure of occupational education, a survey and analysis of present programs; the assessment of articulation between programs; the examination of the structure for viability in the light of internal and external forces promoting change.

### **VTE 625 Interrelationships of Labor, Management and Occupational Education**

A study of the roles of labor and management in our society and their relationship to occupational education; their historical development, the impact of technology, and interpreting the needs of industry for occupational and continuing education.

### **VTE 635 Curriculum Problems of Vocational Schools**

A course planned to fit the needs of vocational technical education instructors in the preparation and use of curriculum material for vocational technical training.

### **VTE 640 Testing and Measurement in Vocational Technical Education**

A study of the elements to be measured in the teaching of vocational technical subjects, together with the application of sound testing procedures to the teaching of shop subjects, technical and related technical subjects. Development of test materials to meet individual teaching situations.

### **VTE 690 Master's Project**

Research or investigation of a particular problem, to be planned and carried out by the student, with consultation and guidance from the instructor. *Prerequisite:* VTE 694.

### **VTE 694 Research in Vocational Technical Education**

A review of current research in occupational education, study of methods of educational research, locating appropriate information, and developing research proposals. (Required of all VT students.)



## Graduate Faculty\*

**Gerald F. Accurso**, Assistant Professor of General Science and Chairperson of the Department (1965), Ed.D., State University of New York at Buffalo.

**Arthur P. Ackerman**, Professor of Learning and Behavioral Disorders (1969), Ph.D., University of Michigan.

**John R. Aiken**, Professor of History (1964), Ph.D., University of Rochester.

**Joan Amrozowicz**, Assistant Professor of Elementary Student Teaching (1966), Ed.D., State University of New York at Buffalo.

**Bernard D. Ansel**, Associate Professor of History (1964), Ph.D., University of Kansas.

**Vincent C. Arnone**, Professor of Art Education and Chairperson of the Department (1963), Ed.D., State University of New York at Buffalo.

**Mary W. Attea**, Associate Professor of Curriculum and Instruction (1970), Ed.D., State University of New York at Buffalo.

**Herbert A. Aurbach**, Professor of Sociology (1970), Ph.D., University of Kentucky.

**Harry Ausprich**, Professor of Journalism, Broadcast and Speech Communication and Dean, Faculty of Arts and Humanities (1973), Ph.D., Michigan State University.

**Charles R. Bachman**, Associate Professor of English (1965), Ph.D., Indiana University.

**Robert C. Baeumler**, Assistant Professor of Fine Arts (1964), M.F.A., Yale University.

**William T. Bailey**, Associate Professor of Mathematics and Chairperson of the Department (1964), Ed.D., State University of New York at Buffalo.

**Charles E. Ball**, Professor of Industrial Arts Education (1956), Ed.D., New York University.

**Victor H. Balowitz**, Associate Professor of Philosophy (1964), Ph.D., Columbia University.

**Joseph P. Barback**, Professor of Mathematics (1969), Ph.D., Rutgers University.

**William J. Barnett**, Professor of Curriculum and Instruction (1950), Ed.D., University of Buffalo.

**Saul Barron**, Professor of Chemistry (1964), Ph.D., Ohio State University.

\*As of April, 1977.

The date in parentheses after the name is that of first appointment to a position on the faculty or staff of this College.

**Kent E. Bath**, Assistant Professor of Psychology (1974), Ph.D., West Virginia University.

**James A. Battistoni**, Associate Professor of Art Education (1965), Ed.D., State University of New York at Buffalo.

**Paul R. Beaudet**, Associate Professor of Geography (1961), Ph.D., Clark University.

**Alfred W. Becker**, Professor of Foreign Language (1963), Ph.D., University of Maryland.

**Nancy B. Belfer**, Professor of Design (1960), M.F.A., School for American Craftsmen.

**William B. Bennett**, Associate Professor of Economics (1969), Ph.D., University of Rochester.

**Marion H. Benz**, Assistant Professor of Curriculum and Instruction (1972), Ed.D., University of Rochester.

**John A. Bice**, Professor of Fine Arts (1963), M.F.A., University of Colorado.

**Edward C. Biewald**, Associate Professor of Industrial Arts Education (1969), Ph.D., University of Connecticut.

**John J. Bishop**, Professor of Fine Arts (1968), Ph.D., Boston University.

**David A. Blaeuer**, Assistant Professor of Mathematics (1964), Ed.D., State University of New York at Buffalo.

**Joseph A. Bolinsky**, Professor of Fine Arts (1954), M.F.A., State University of Iowa.

**Michael W. Boyd**, Assistant Professor of Mathematics (1974), Ph.D., State University of New York at Binghamton.

**James F. Brennan**, Associate Professor of Psychology (1972), Ph.D., Kent State University.

**Wesley F. Brett**, Professor of Design (1959), M.Ed., University of New Hampshire.

**Monica C. Brinson**, Associate Professor of Consumer and Business Studies (1959), M.S., Purdue University.

**Robert W. Brock**, Professor of Fine Arts (1962), M.F.A., Ohio University.

**Stanley E. Brooks**, Professor of Industrial Arts Education (1961), Ed.D., University of North Dakota.

**E. Carole Brown**, Assistant Professor of English (1973), Ph.D., State University of New York at Buffalo.

**Edmund A. Brown**, Professor of History (1948), Ph.D., Columbia University.

**Richard C. Brown**, Professor of History and Distinguished Service Professor (1952), Ph.D., University of Wisconsin.



**Jack C. Brueckman, Jr.**, *Professor of Industrial Arts Education* (1964), Ed.D., State University of New York at Buffalo.

**Eric Brunger**, *Professor of History and the State University Chancellor's Award for Excellence in Teaching, 1972-73* (1954), Ph.D., Syracuse University.

**John J. Bruno**, *Professor of Curriculum and Instruction* (1966), Ed.D., State University of New York at Buffalo.

**Richard C. Burau**, *Professor of Foundations of Education* (1967), Ed.D., University of Buffalo.

**Robert C. Burkhardt**, *Professor of Art Education* (1965), Ed.D., Pennsylvania State University.

**William E. Burns**, *Professor of Industrial Arts Education* (1966), Ed.D., University of Maryland.

**Robert E. Buxton**, *Professor of Industrial Arts Education* (1967), Ed.D., University of Maryland.

**David A. Cappiello**, *Professor of Industrial Arts Education* (1948), Ed.D., State University of New York at Buffalo.

**Joaquin J. Cardoso**, *Professor of History* (1968), Ph.D., University of Wisconsin.

**Jerry F. Cataldo**, *Associate Professor of Psychology and Chairperson of the Department* (1969), Ph.D., State University of New York at Buffalo.

**Fred E. Chapman**, *Associate Professor of Industrial Arts Education* (1964), Ed.D., State University of New York at Buffalo.

**Rudolph J. Cherkauer**, *Professor of Mathematics* (1948), Ed.D., University of Buffalo.

**Marie S. Clabeaux**, *Associate Professor of Anthropology and Chairperson of the Department* (1973), Ph.D., State University of New York at Buffalo.

**Dorris M. Closs**, *Associate Professor of Home Economics and Chairperson of the Department* (1967), M.S.Ed., State University College at Buffalo.

**Leo A. Cohen**, *Professor of Curriculum and Instruction* (1969), Ed.D., Boston University.

**Sidney Cohen**, *Professor of Chemistry* (1966), Ph.D., University of Colorado.

**Nat J. Colletta**, *Assistant Professor of Foundations of Education* (1973), Ph.D., Michigan State University.

**Henry M. Collins**, *Associate Professor of Biology* (1958), A.M., Harvard University.

**June M. Collins**, *Professor of Anthropology* (1968), Ph.D., University of Chicago.

**Orvis F. Collins**, *Professor of Sociology* (1968), Ph.D., University of Chicago.

**David T. Converse**, *Assistant Professor of Behavioral Studies* (1964), Ph.D., University of Nebraska.

**Bryna R. Cooperman**, *Assistant Professor of Curriculum and Instruction* (1969), Ed.D., Ball State University.

**Eloise N. Courter**, *Professor of English* (1966), Ph.D., University of Minnesota.

**Keith L. Curry**, *Associate Professor of Mental Retardation/Physical Handicap* (1970), Ph.D., University of Iowa.

**Stanley A. Czurles**, *Professor of Art Education, the State University Chancellor's Award for Excellence in Teaching, 1974-75 and Distinguished Service Professor* (1931), Ph.D., University of Iowa.

**Daniel P. Dacey, Jr.**, *Associate Professor of Foreign Language* (1960), A.M., Boston University.

**Eugene L-G Dakin**, *Professor of Design* (1947), M.S., Professional Diploma, Columbia University.

**Robert E. Davidson**, *Associate Professor of Fine Arts* (1959), M.F.A., University of Guanajuato.

**Robert J. Davitt**, *Assistant Professor of General Science and the State University Chancellor's Award for Excellence in Teaching, 1976-77* (1965), Ed.D., State University of New York at Buffalo.

**Manuel P. De Almeida**, *Associate Professor of Foreign Language* (1964), Ph.D., Laval University.

**Ram Desai**, *Professor of Political Science* (1963), Ph.D., Michigan State University.

**James S. Dick**, *Assistant Professor of Social Studies Education* (1973), Ed.D., Indiana University.

**Stanley Dickson**, *Professor of Communication Disorders* (1956), Ed.D., State University of New York at Buffalo.

**Richard C. Diedrich**, *Associate Professor of Mathematics and Director of Institutional Research* (1964), Ph.D., Syracuse University.

**Mary K. Dienst**, *Associate Professor of Nutrition and Food Science and Chairperson of the Department* (1965), M.S., Cornell University.

**William A. Donnelly**, *Professor of English* (1964), Ed.D., Teachers College, Columbia University.

**Thomas A. Donovan**, *Associate Professor of Chemistry* (1968), Ph.D., University of Illinois.

**Edith F. Douglas**, *Associate Professor of Consumer and Business Studies* (1951), M.Ed., University of New Hampshire.



**George W. Dowdall III**, Associate Professor of Sociology (1973), Ph.D., Brown University.

**Jean A. Dowdall**, Assistant Professor of Sociology (1973), Ph.D., Brown University.

**Kenneth J. Downey**, Professor of Sociology (1968), Ph.D., University of Illinois.

**Henry S. Dowski**, Associate Professor of Elementary Student Teaching (1967), Ed.D., State University of New York at Buffalo.

**Naula M. Drescher**, Professor of History (1965), Ph.D., University of Delaware.

**Fraser B. Drew**, Professor of English and Distinguished Teaching Professor (1945), Ph.D., University of Buffalo.

**Sherman F. Dreyer**, Professor of Industrial Arts Education (1964), Ed.D., University of Oklahoma.

**Walter M. Drzewieniecki**, Professor of History (1963), Ph.D., University of Chicago.

**Judith F. Duchan**, Assistant Professor of Communication Disorders (1973), Ph.D., University of Illinois.

**Marshall J. Duguay**, Professor of Communication Disorders (1965), State University of New York at Buffalo.

**John Dwyer**, Assistant Professor of English (1970), Ph.D., State University of New York at Buffalo.

**Theodore E. Eckert**, Professor of Biology (1953), Ph.D., Cornell University.

**Frank C. Eckmair**, Professor of Fine Arts (1963), M.F.A., Ohio University.

**Doris K. Eddins**, Professor of Curriculum and Instruction (1947), Ed.D., Michigan State University.

**Rupert J. Ederer**, Professor of Economics (1967), Ph.D., St. Louis University.

**Ann L. Egan**, Associate Professor of Behavioral Studies (1972), Ph.D., State University of New York at Buffalo.

**Mohamed El-Behairy**, Professor of Political Science (1963), Ph.D., Ohio State University.

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**William E. Engelbrecht**, Assistant Professor of Anthropology (1973), Ph.D., University of Michigan.

**Gerhard Falk**, Professor of Sociology (1957), Ed.D., State University of New York at Buffalo.

**Velma J. Febel**, Professor of Behavioral Studies (1956), Ed.D., State University of New York at Buffalo.

**Joseph A. Fekete**, Professor of Geography (1960), Ph.D., University of Illinois.

**Herbert V. Ferster**, Professor of Behavioral Studies (1966), Ph.D., State University of New York at Buffalo.

**Abel K. Fink**, Professor of Behavioral Studies (1956), Ed.D., Teachers College, Columbia University.

**Mary E. Fiore**, Professor of Music (1963), Ph.D., Indiana University.

**Mildred J. Fischle**, Professor of Curriculum and Instruction (1965), Ed.D., Ball State University.

**Marillyn M. Flavin**, Associate Professor of Elementary Student Teaching (1967), Ed.D., State University of New York at Buffalo.

**Irving S. Foladare**, Professor of Sociology (1958), Ph.D., Columbia University.

**Monroe Fordham**, Assistant Professor of History (1970), Ph.D., State University of New York at Buffalo.

**Richard J. Foster**, Associate Professor of Geosciences (1965), M.S., Western Reserve University.

**Bernhard Frank**, Professor of English (1965), Ph.D., University of Pittsburgh.

**Richard F. Frazita**, Assistant Professor of Elementary Student Teaching (1969), Ed.D., State University of New York at Buffalo.

**E. K. Fretwell, Jr.**, President (1967), Ph.D., Columbia University.

**Barbara R. Frey**, Professor of Curriculum and Instruction and Vice President for Academic Affairs (1963), Ed.D., Indiana University.

**Betty Gallagher**, Professor of Communication Disorders (1946), Ph.D., University of Wisconsin.

**William T. Ganley**, Assistant Professor of Economics (1972), Ph.D., University of California at Berkeley.

**William F. Georgenes**, Assistant Professor of Fine Arts (1973), M.F.A., Yale University.

**Steven Gittler**, Professor of Curriculum and Instruction (1955), Ed.D., University of Buffalo.

**Robert J. Glenn**, Associate Professor of Behavioral Studies (1968), Ph.D., United States International University-California, Western Campus.

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**Arline H. Golden**, Associate Professor of English (1970), Ph.D., Indiana University.



**Beverley F. Gounard**, Assistant Professor of Psychology (1971), Ph.D., University of Waterloo.

**Albert Grande**, Professor of Foundations of Education (1970), Ph.D., University of Pittsburgh.

**Francis L. Grandison**, Professor of Human Development, Family and Community Relations (1970), Ph.D., New York University.

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**Fred H. Greenberg**, Professor of Chemistry (1964), Ph.D., University of Chicago.

**Walter B. Greenwood**, Professor of English and Distinguished Service Professor (1950), Ph.D., University of Cincinnati.

**Richard Gubernick**, Associate Professor of Fine Arts (1969), M.F.A., University of Massachusetts.

**James Guyker**, Assistant Professor of Mathematics (1970), Ph.D., Lehigh University.

**Paul V. Hale**, Professor of English and Chairperson of the Department (1963), Ph.D., New York University.

**Frank K. Harman**, Professor of Physics (1955), Ph.D., Ohio State University.

**James D. Haynes**, Professor of Biology and Chairperson of the Department (1967), Ph.D., Iowa State University.

**Ruth E. Heintz**, Associate Professor of Mathematics (1965), Ed.D., State University of New York at Buffalo.

**Lyle H. Hemink**, Professor of Curriculum and Instruction (1962), Ed.D., State University of New York at Buffalo.

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**Donald A. Hess**, Professor of Communication Disorders (1964), D.Ed., Pennsylvania State University.

**Donald R. Hetzner**, Associate Professor of Social Studies Education (1970), Ed.D., State University of New York at Buffalo.

**Joseph K. Hichar**, Professor of Biology (1970), Ph.D., Harvard University.

**Albert A. Himmel**, Associate Professor of Chemistry (1962), M.A., Montclair State Teachers College.

**Emil H. Hoch**, Professor of Industrial Arts Education (1966), Ed.D., University of Maryland.

**Melvin J. Hoffman**, Associate Professor of English (1968), Ph.D., State University of New York at Buffalo.

**Frank A. Hoffmann**, Professor of English (1966), Ph.D., Indiana University.

**Saul J. Horowitz**, Associate Professor of Art Education (1960), M.F.A., Cranbrook Academy of Art.

**Robert E. Horvat**, Assistant Professor of General Science (1972), Ph.D., University of Wisconsin.

**Frederick C. Howe**, Assistant Professor of Behavioral Studies (1972), Ph.D., Michigan State University.

**Julius J. Hubler**, Professor of Design (1948), Ed.D., Columbia University.

**Irene M. Hulicka**, Professor of Psychology and Dean, Faculty of Natural and Social Sciences (1967), Ph.D., University of Nebraska.

**Glenn F. Hurst**, Assistant Professor of Elementary Student Teaching (1969), Ed.D., State University of New York at Buffalo.

**Ivor Ilmet**, Associate Professor of Chemistry (1967), Ph.D., New York University.

**Hadar Isseroff**, Associate Professor of Biology (1968), Ph.D., Purdue University.

**S. James Jakiel**, Associate Professor of English (1963), Ed.D., State University of New York at Buffalo.

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**John J. Jauquet**, Assistant Professor of Design (1968), M.F.A., University of Wisconsin.

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**Georgiana Jungels**, Assistant Professor of Art Education (1974), M.A., State University of New York at Buffalo.

**Estelle M. Kane**, Associate Professor of Human Development, Family and Community Relations (1959), M.A., State University of Iowa.

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**Henry Klomp**, *Professor of English* (1955), Ph.D., University of Michigan.

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**Clifford V. Lochhaas**, *Associate Professor of Learning and Behavioral Disorders* (1967), Ed.D., State University of New York at Buffalo.

**Harold R. Lofgren**, *Professor of Art Education* (1949), M.A., Teachers College, Columbia University.

**Bradley A. Lown**, *Associate Professor of Psychology and the State University Chancellor's Award for Excellence in Teaching*, 1973-74 (1970), Ph.D., State University of New York at Buffalo.

**Nancy J. Lund**, *Assistant Professor of Communication Disorders* (1973), Ph.D., University of Maryland.

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**John A. Palmer**, Professor of Foundations of Education and State University Chancellor's Award for Excellence in Teaching, 1976-77 (1960), Ph.D., State University of New York at Buffalo.

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**Lois W. Pearson**, Professor of Curriculum and Instruction (1960), Ed.D., University of Rochester.

**Elizabeth G. Penn**, Professor of Behavioral Studies (1947), Ed.D., Teachers College, Columbia University.

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**William C. Scheffler**, Professor of Biology (1958), Ed.D., State University of New York at Buffalo.

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**Estella Schoenberg**, Associate Professor of English (1967), Ph.D., University of Tulsa.

**Margaret M. Schrader**, Professor of Human Development, Family and Community Relations (1948), Ed.D., State University of New York at Buffalo.

**William H. Schunak**, Associate Professor of Elementary Student Teaching (1969), Ed.D., State University of New York at Buffalo.

**Stanford J. Searl, Jr.**, Assistant Professor of English (1969), Ph.D., Syracuse University.

**Howard G. Sengbusch**, Professor of Biology (1951), Ph.D., New York University.

**Carl K. Seyfert**, Associate Professor of Geology (1967), Ph.D., Stanford University.

**Frank E. Sharkey**, Associate Professor of Industrial Arts Education (1966), M.A., Ball State Teachers College.

**George R. Sherrie**, Professor of Behavioral Studies (1947), Ed.D., Syracuse University.

**J. Stephen Sherwin**, Professor of English (1956), Ed.D., New York University.

**Francis T. Siemankowski**, Professor of General Science (1964), Ed.D., State University of New York at Buffalo.

**Noel Simmons**, Professor of Chemistry (1959), Ph.D., University of Minnesota.

**Robert B. Simpson**, Professor of Education and Coordinator of International Education (1966), Ed.D., Teachers College, Columbia University.

**Surjit Singh**, Associate Professor of Chemistry (1967), Ph.D., St. Louis University.

**Julius P. Slavenas**, Associate Professor of History (1962), Ph.D., University of Chicago.

**John J. Slivka**, Associate Professor of Mathematics (1969), Ph.D., State University of New York at Buffalo.

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**Edward O. Smith, Jr.**, Professor of History and Chairperson of the Department (1963), Ph.D., Lehigh University.

**Ralph D. Sollars**, Professor of Education and Associate Dean, Faculty of Applied and Professional Studies (1965), Ph.D., Ohio State University.

**Adrian Solomon**, Professor of Human Development, Family and Community Relations (1968), Ph.D., Cornell University.

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**Robert Squeri**, Professor of Fine Arts (1955), Ed.D., Columbia University.



**Eugene C. Stafford**, Assistant Professor of Industrial Arts Education (1964), D.Ed., The Pennsylvania State University.

**H. Gene Steffen**, Director of Instructional Resources (1946), Ph.D., Cornell University.

**Robert C. Stein**, Professor of Biology (1965), Ph.D., Cornell University.

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**Terence J. Trudeau**, Professor of Industrial Arts Education and Chairperson of the Department (1961), Ph.D., Bowling Green State University.

**Marvin Tunis**, Professor of Chemistry (1968), Ph.D., University of Illinois.

**John Urban**, Professor of Biology and Distinguished Service Professor (1946), Ph.D., Teachers College, Columbia University.

**Rolland Van Hattum**, Professor of Communication Disorders (1963), Ph.D., Pennsylvania State University.

**Conrad C. Vogler**, Associate Professor of Sociology (1964), Ph.D., Ph.D., State University of New York at Buffalo.

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**Norman F. Weaver**, Professor of History and State University Chancellor's Award for Excellence in Teaching, 1976-77 (1950), Ph.D., University of Wisconsin.

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**Robert S. Webber**, Assistant Professor of English (1970), Ph.D., State University of New York at Buffalo.

**James W. Wells**, Associate Professor of Physics (1968), Ph.D., State University of New York at Buffalo.

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**Ralph W. Williams**, Professor of Consumer and Business Studies and Dean of Faculty of Applied and Professional Studies (1973), Ph.D., University of Oregon.

**DuWayne E. Wilson**, Associate Professor of Design (1960), M.S.Ed., State University of New York at Buffalo.

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**Earl W. Wolfgruber**, Professor of Design (1960), Ed.M., State University of New York at Buffalo.

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**Darrell D. Young**, Associate Professor of General Science (1960), Ed.D., State University of New York at Buffalo.

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**Joseph S. Zingaro**, Professor of Chemistry (1958), Ph.D., Syracuse University.

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