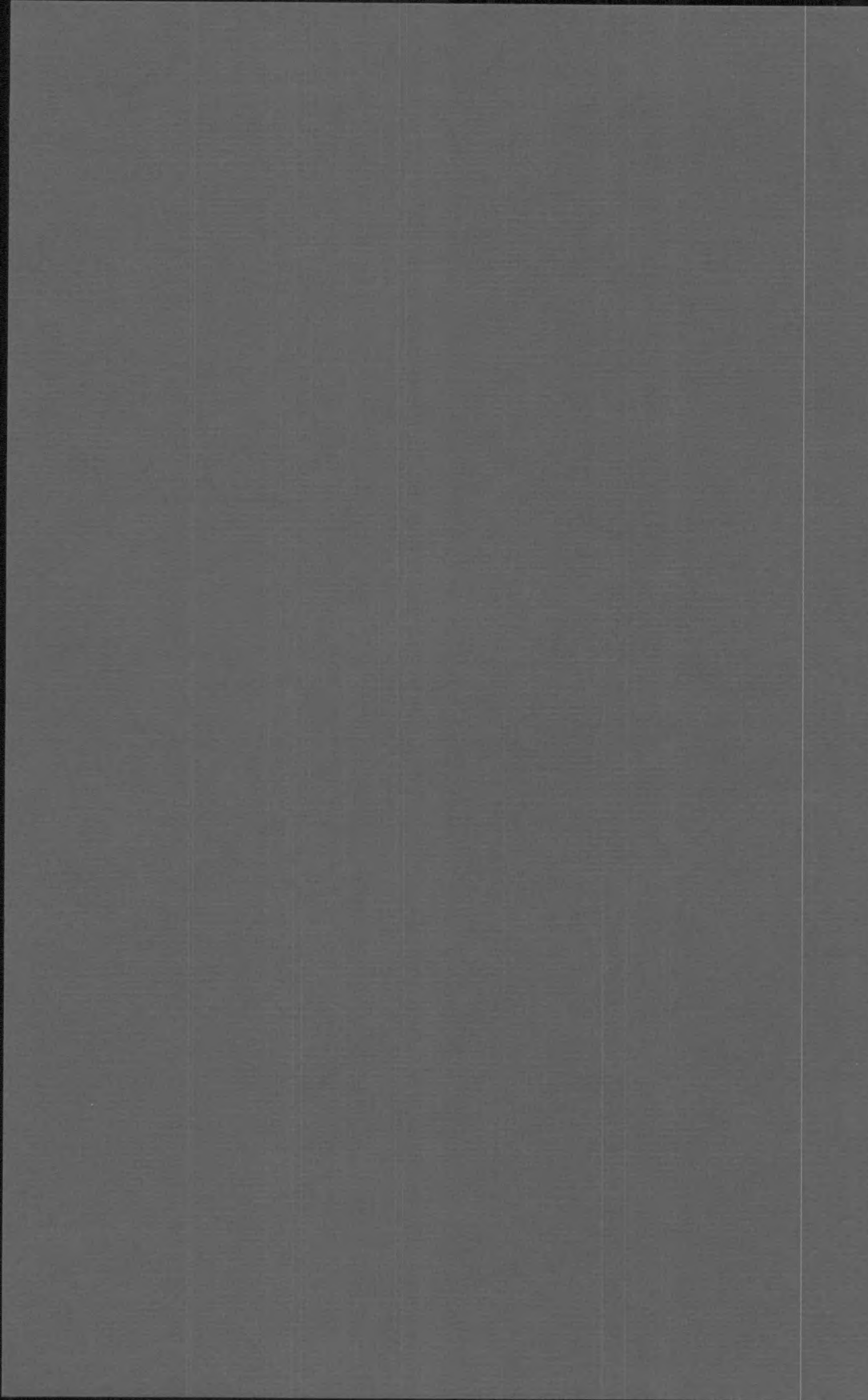


Cornell University
Announcements
Field of
Education
1972-73



Cornell University

Field of Education

1972-73

Cornell University Announcements

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Cornell Academic Calendar

1971-72

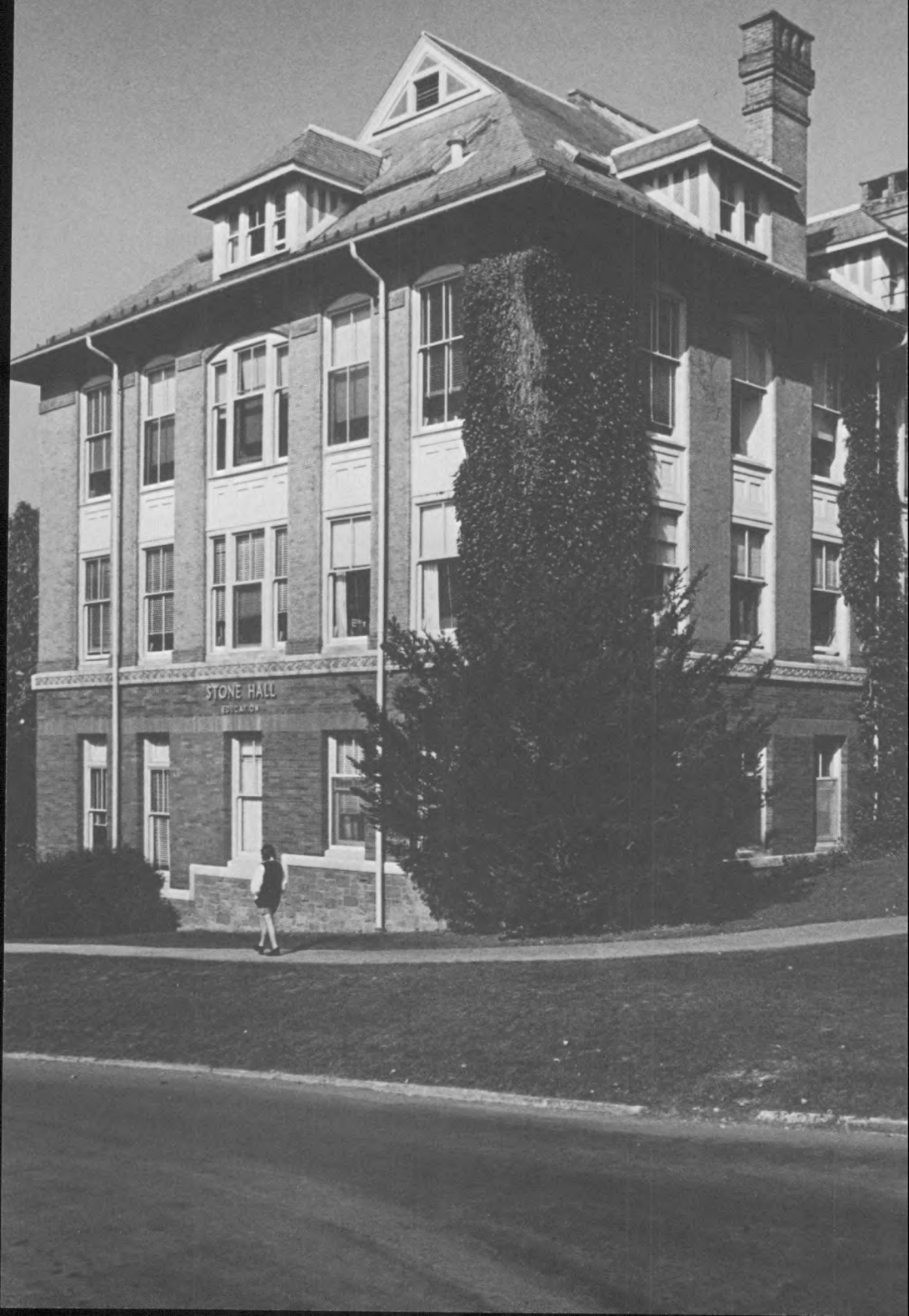
Registration, new students	Thursday, September 2
Registration, continuing and rejoining students	Friday, September 3
Fall term instruction begins, 7:30 a.m.	Monday, September 6
Thanksgiving recess:	
Instruction suspended, 1:10 p.m.	Wednesday, November 24
Instruction resumed, 7:30 a.m.	Monday, November 29
Fall term instruction ends, 1:10 p.m.	Saturday, December 11
Independent study period begins, 2:00 p.m.	Saturday, December 11
Final examinations begin	Thursday, December 16
Final examinations end	Thursday, December 23
Christmas recess and intersession	
Registration, new and rejoining students	Thursday, January 20
Registration, continuing students	Friday, January 21
Spring term instruction begins, 7:30 a.m.	Monday, January 24
Spring recess:	
Instruction suspended, 1:10 p.m.	Saturday, March 18
Instruction resumed, 7:30 a.m.	Monday, March 27
Spring term instruction ends, 1:10 p.m.	Saturday, May 6
Independent study period begins, 2:00 p.m.	Saturday, May 6
Final examinations begin	Monday, May 15
Final examinations end	Monday, May 22
Commencement Day	Friday, May 26

The dates shown in the Academic Calendar are subject to change at any time by official action of Cornell University.

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The courses and curricula described in this *Announcement*, and the teaching personnel listed herein, are subject to change at any time by official action of Cornell University.



STONE HALL
EDUCATION

Cornell University

Field of Education

This *Announcement* is concerned primarily with the Field of Education in the Graduate School and with the courses of instruction offered by the Department of Education in the New York State College of Agriculture and Life Sciences, and the Department of Community Service Education in the New York State College of Human Ecology.

The Field of Education at Cornell is concerned with scholarly study of a wide range of educational topics. Students may emphasize the improvement of teaching a particular subject, the theory and practice of a functional educational specialization, or the application of a relevant discipline to problems of education.

Graduate work at Cornell is highly individualized, and each student plans his own program with the advice of a Special Committee selected by him. He is encouraged to avail himself of the many curricular and scholarly resources of the entire University. In doing so, he will find opportunities to work closely with faculty members in individualized programs featuring courses, seminars, independent study, and practical experience.

Undergraduates interested in becoming teachers follow degree programs in their respective colleges or schools.

For further information not found in the following pages regarding any major subject, inquiries may be sent to the chairman of the division offering work in that major subject.

Graduate Programs

Agricultural and Occupational Education

The graduate program in agricultural and occupational education prepares the stu-

dent for positions in teaching, research, supervision, and administration in public schools, technical schools, and colleges and universities, as well as for specialized positions as teacher-educators and administrators in occupational education. Graduates may also follow careers in state and federal education agencies or in overseas educational programs. Candidates may study for the M.S., M.A.T., M.P.S., Ed.D., or Ph.D. degree.

Students may concentrate on aspects of occupational education such as administration, curriculum, research, supervision, or teacher education. At the Master's level, prior experience as a teacher is desirable but not required. For doctoral candidates, a minimum of three years prior experience in teaching, administration, or supervision is recommended.

Opportunities for programs tailored to individualized needs and interests characterize the graduate program in agricultural and occupational education. Candidates are encouraged to take a significant part of their course work in related fields of study which will contribute to their professional goals.

Research training and experience will be gained through participation in studies on a local, state, or national basis. Many research projects are supported by state and national agencies or organizations.

Recent countrywide expansion in programs of vocational education affords many good career opportunities for specialists in occupational education. Cornell graduates of this program hold positions in all the career fields previously described.

For further information, apply to the Chairman, Division of Agricultural and Occupational Education, Stone Hall.

Community Service Education

The graduate program in community service education is focused on the analysis of a wide range of human service delivery systems—education, social services, community health services, and other services intended to help people improve or maintain the quality of everyday life. The aim of such analysis is to identify the understanding and skills required by human service professionals and auxiliary workers and to design personnel education programs that are more generic in character than those frequently found in professional schools. The program prepares students for teaching, research, public service, and other educational roles related to the well-being of individuals and families. All students have opportunity for field experience.

Current research interests include: the development and evaluation of a community service education center where a combination of theory and field experience is made available to students; the creation of a Human Services Training Program where social agencies, schools, and colleges work together to strengthen the paraprofessional-professional team of workers; a study of the effectiveness of paraprofessionals in community services working with low-income families; a study of education and comparative family development using the concepts of individual family and community differentiation; and consideration of the effects of structural and aggregated predictor variables on adolescent anomie and vocational planning in rural, suburban, and urban high schools.

For further information apply to the Chairman, Department of Community Service Education, Martha Van Rensselaer Hall.

Career Education

The Cornell Institute for Research and Development in Career Education, a recent addition to the resources of the Department of Education, functions cooperatively with the New York State Education Department and local education agencies to strengthen and enhance occupation and career education programs and services in New York. The objectives of the Institute are a) to provide training for present and future profes-

sional leaders and researchers in the area of occupational education; b) to initiate and conduct research related to occupations and career education, and c) to disseminate information regarding occupational and career education research.

Consistent with these objectives, graduate study and research projects are supported by the Institute. Students interested in this Program should write to the Director, Cornell Institute for Career Education, Stone Hall.

Curriculum and Instruction

The graduate program in curriculum and instruction is devoted to study of the curriculum and its relation to instruction at all levels. Research includes analysis of teaching behavior, investigation of cognitive processes in instruction, theories of curriculum organization, and development of instructional materials.

Programs of study prepare students for faculty positions in colleges and universities, or as instructional administrators in public schools. Certification as instructional administrator: curriculum may be obtained.

Candidates for the Doctor of Philosophy or Doctor of Education degrees may elect appropriate minors in an academic teaching field, in supporting disciplines, and in the Field of Education.

The Master of Arts and Master of Science degree programs offer *experienced* teachers the opportunity to study curriculum and instruction generally, plus advanced study in a teaching field. Certification as a teacher may be completed concurrently.

Students who have experience in general elementary or certain secondary fields will find curriculum and instruction the most suitable major area for advanced study.

For further information, apply to the Chairman, Division of Curriculum and Instruction, Stone Hall.

Educational Administration

Graduate students in educational administration are offered a broad, varied curriculum in the social sciences that relates to educational administration. Each student works out an individualized, coordinated program with the help of his advisers. Emphasis is placed throughout

upon independent study and research rather than the routine accumulation of course credits.

Instruction is conducted in a variety of ways. Courses in the social sciences develop the theoretical concepts upon which the art of administration is based. Internships and supervised field experiences emphasize technical and human skills. Study in educational administration integrates theory with the practical by means of case studies, simulation, specialized courses, and seminars.

Graduates accept positions as professors of educational administration or as administrators of school systems, two- and four-year colleges, and universities. New York State approved certification programs are offered to prepare persons for field roles in educational administration. Successful completion of a prescribed program ensures certification in New York State if experience requirements are also met.

For further information, apply to the Chairman, Division of Educational Administration, Stone Hall.

Educational Psychology and Measurement

Educational psychology is a behavioral science. Its concepts and principles comprise the body of knowledge relevant to the improvement of classroom learning. Many disciplines including anthropology, child development, psychology, and sociology contribute to educational psychology through research findings on the nature of growth and development, cognition, motivation, social interaction, and personality.

The need for more educational psychologists well trained in the basic disciplines and in the newer patterns of educational research has been highlighted by the present nationwide emphasis on educational problems. Competent educational psychologists who have a strong background in the liberal arts and who have a broad understanding of the behavioral science fields and of the process of education, are being sought for positions in teaching and research in colleges and universities. Individuals who possess a thorough knowledge of educational measurement, research design, and statistical analysis, as well as a facility for using the tools of electronic data process-

ing, are in great demand. Training in these subjects may be received in this division.

Programs in educational psychology and measurement emphasize human learning and its measurement. Students minor in at least one of the related sciences and enroll in the courses of various departments of the University, such as the Departments of Psychology or Human Development and Family Studies in addition to those offered in Education. These experiences provide for a solid background in the basic disciplines as well as for personal contacts with faculty and students in other departments of the University. The Master's or the Ph.D. degree may be earned. Preference in admissions will be given to doctoral degree applicants or Master's degree applicants who intend to continue work for the doctorate.

The present research interests of personnel in the division include the following: the measurement of cognitive abilities, particularly the measurement of those skills and understandings which are interdisciplinary in nature; the determination of the relationships of learner and teacher characteristics to differential success in learning from various structured tasks; the development of an understanding of how children acquire reading skills; the study of learning, transfer, and forgetting simple verbal materials; and the design and research phases of the development of instructional materials.

Opportunities for research and teaching assistantships are varied. Students in educational psychology may receive appointments not only in their division but also in other units of the University.

At the present time, no school psychology program is offered.

For further information, apply to the Chairman, Division of Educational Psychology, Stone Hall.

Educational Research Methodology

The task of educational research methodology is to appraise scientifically generative ideas, methods, products, and values by describing and explaining them, by identifying their limitations and advantages, by clarifying underlying presuppositions, and by projecting judgments about the likely consequences of their

8 Guidance, Student Personnel Administration

use in the context of educational research. Programs for students who major in this subject are aimed at those who enjoy mathematics or the philosophy of science and who are interested in applying analytical methods to problems of education.

Programs in educational research methodology are varied but almost always include the study of techniques of measurement, applied statistics, methods of program evaluation, and conceptual problems in educational inquiry. Students may select minors from a number of appropriate subjects and are encouraged to make use of the total course and research resources of the University.

There are an increasing number of employment opportunities for educational research methodologists. In addition to the usual university teaching positions, research methodologists are employed by state and local agencies, national research and development laboratories, and private and nonprofit industries developing educational materials. Many are involved in evaluating the effectiveness of new educational programs which are being instituted at all levels of education.

For further information, apply to the Chairman, Division of Educational Research Methodology, Stone Hall.

Extension and Continuing Education

The curriculum in extension and continuing education, leading both to the Master of Science and Doctor of Philosophy degrees, is designed to prepare administrators, supervisors, training specialists, and research scholars for leadership positions in community and junior colleges, four-year colleges and universities, cooperative and university extension systems, public schools, and other continuing education agencies, both in the United States and abroad. The central objective is to develop creative professional leaders who can initiate, organize, and effectively execute such programs in differing economic, cultural, physical, and institutional environments. Major focus is on helping students understand the nature and role of the continuing education process at the adult level and how to utilize it effectively as the activating force in planned programs of economic and social change.

The curriculum is highly interdisciplinary. Individual study plans are devel-

oped through personal counseling. The theory, technology, principles, and methodology central to the adult education process are covered in divisional graduate courses and seminars. Concepts gained from these studies form a nucleus around which students integrate studies in a number of supporting disciplines which further their understanding of problems encountered in programs of planned change through the education of adults.

Faculty and student research interests include the structure of extension and other continuing education organizations for adults, the design of programs, communication processes, leadership of adult education agencies, staffing, professional training, and the evaluation of programs.

Graduates typically accept or return to positions of leadership in a wide range of adult education agencies including extension systems, colleges and universities, public schools, and other continuing education institutions, both in the United States and abroad.

In addition to meeting standards of the Graduate School, applicants usually must have had successful experience in extension or other continuing education agencies; leadership ability as evidenced by positions held, promotions, and recommendations; and sound reasons for undertaking graduate study in this field. For further information, write to the Chairman, Division of Extension and Continuing Education, Stone Hall.

Guidance and Student Personnel Administration

Programs in guidance and student personnel administration, leading to a Master of Arts, Master of Science, or doctoral degree, are appropriate for those who wish to prepare for positions in counseling, in college student personnel administration, or in related university teaching and research.

The Master's degree program in student personnel administration may be designed to prepare individuals for professional positions in higher education, including two-year colleges, or for further graduate study. Students major in guidance and personnel administration and have a minor in an area of study that supports their major interests. The program combines rigorous academic study and practicum experience. Each applicant should

possess a strong undergraduate academic background and a professional commitment to college student personnel work.

Each doctoral candidate plans an appropriate sequence of courses, taking into consideration degree requirements, his previous preparation, and his vocational objective. In addition to work in guidance and personnel administration, one minor must be in some branch of psychology, and a second minor is to be selected in consultation with the chairman of his Special Committee.

For further information, write to the Chairman, Division of Guidance and Student Personnel Administration, Stone Hall.

History, Philosophy, and Sociology of Education

Doctoral candidates in this area specialize in one or more of the following four areas: history of education, philosophy of education, sociology of education, and comparative education.

History of education emphasizes American education, comparative and international education, higher education, and recent trends toward innovative education programs.

Philosophy of education involves conceptual analysis of educational aims, structure of knowledge, curriculum and instruction, policy and governance, and problems of education practice. It carries out systematic study on major philosophers of education, epistemology, philosophy of mind, political philosophy, philosophy of behavioral sciences, and educational research.

Sociology of education is the study of the social structure of schools and classrooms, institutional allocation of talent, occupations, administrative science, and organizations.

For further information, write to the Chairman, Division of History, Philosophy, and Sociology of Education, Stone Hall.

Home Economics Education

The major in home economics education focuses on the analysis of education as an instrument for effective change, with special emphasis on improving the quality of everyday life. Central to the program is study of the nature of change—describing, predicting, effecting, and measuring it. Students interested in becoming teacher

educators have opportunity to enroll in a planned sequence of courses and field experiences, culminating in a practicum in which they assume responsibility for a student field experience. Current research includes: evaluation of programs in homemaking and consumer education designed for socioeconomically disadvantaged adults; the development and evaluation of programs to prepare teachers of home economics for disadvantaged urban areas; evaluation of training programs for paraprofessionals in the human services; cross-cultural studies relating educational and sociological factors to individual behavior and family development. It is expected that M.S. and Ph.D. candidates will have backgrounds in home economics, the related sciences, and education. M.A.T. programs are available for home economics graduates seeking certification to teach at the secondary level (see p. 11).

For further information, write to the Chairman, Department of Community Service Education, New York State College of Human Ecology.

Science and Environmental Education

Undergraduate and graduate programs in the area of science and environmental education prepare students for careers in elementary-school teaching (science), secondary-school science teaching, college science teaching, teacher preparation and supervision, nature and conservation education, and research in learning theory as applied to science education. Graduate candidates may earn the degree of Master of Science, Master of Arts in Teaching, or Doctor of Philosophy.

Candidates for an advanced degree, particularly those seeking the doctorate, can plan a degree program that will prepare them for college science teaching positions.

Teachers and others with strong interests in education who hold Bachelor's degrees may follow Master's or doctoral degree programs that lead to teaching and administrative careers in public or private conservation departments or organizations, Audubon societies, interpretive nature programs, and extension work. In addition to upgrading a secondary-school teaching certificate, graduate work in these fields can serve as preparation

10 Degree Requirements

for college teaching. Graduate students have opportunities to develop research studies that help to clarify problems related to their future careers.

The Division of Science and Environmental Education is placing increasing emphasis on graduate training to prepare professionals for research in education. A number of teaching and research assistantships and several fellowships are available.

For further information, apply to the Chairman, Division of Science and Environmental Education, Stone Hall.

Admissions

Students majoring in the Field of Education may be admitted for either of two types of advanced degrees: the *general degrees* of M.A., M.S., and Ph.D., administered by the Graduate School, and the *professional degrees* of M.A.T. or Ed.D., administered by the Field of Education of the Graduate School.

It is the responsibility of the candidate to become familiar with the various regulations which apply to his degree candidacy and to satisfy them in the proper manner. The general regulations are contained in the *Code of Legislation of the Graduate Faculty*; specific requirements and/or exceptions to the general regulations are found below.

All applicants for admission to the Graduate School with majors in Education who are residents of the United States or Canada and whose native language is English are required to submit with their application either a score from the Graduate Record Examinations Aptitude Test or the scores of both the Miller Analogies Test and the Doppelt Mathematical Reasoning Test. The GRE score is necessary for University fellowship applications. Information regarding the location of test centers can be obtained by writing the Guidance and Testing Center, Olin Hall, Cornell University, Ithaca, New York 14850.

Degree Requirements

General Degrees

The differences between the general degree programs and those of the professional degrees relate to the manner of

meeting residence requirements, the emphasis on research, the specification of hours of credit required, the selection of major and minor subjects, and the program of studies.

Students admitted for the degrees of Master of Arts, Master of Science, or Doctor of Philosophy may either major or minor in the following subjects of study: Agricultural and Occupational Education
Community Service Education
Curriculum and Instruction
Education (Minor subject only)
Educational Administration
Educational Psychology and Measurement
Educational Research Methodology
Extension and Continuing Education
Guidance and Personnel Administration
History, Philosophy, and Sociology of Education
Home Economics Education
Science and Environmental Education

Language Requirement. The language requirement for the degree of Ph.D. is left to the discretion of the candidate's Special Committee. There is no language requirement for the M.A. or M.S. degree.

Teaching Experience. The Field of Education requires teaching experience of all graduate students as a part of the requirements for an advanced degree.

Residence. The Graduate School faculty requires that each candidate for a Master's degree earn two units of residence, and for the Ph.D. degree, six units of residence. All requirements for these degrees must be completed within four and seven years, respectively, of the time of first registration in the Graduate School.

Thesis. Candidates for the M.A., M.S., or Ph.D. degree are required to submit a thesis in fulfillment of the requirements for the degree.

Examinations. For the Master's degree, a final examination is required. For the Ph.D. degree, a comprehensive admission to candidacy examination and a final examination are required. Examinations may be oral or both oral and written.

Professional Degrees

Advanced professional degrees in education are designed as preparation for the

professions in education. Two professional degrees, Master of Arts in Teaching and Doctor of Education, are awarded.

Master of Arts in Teaching (M.A.T.)

The degree of Master of Arts in Teaching (M.A.T.) is designed for those with a baccalaureate degree, planning to undertake professional preparation in the fifth year. Teaching areas for this degree include agriculture, biology, chemistry, earth science, English, French, home economics, mathematics, physics, social studies, and Spanish. Graduates of a teacher-training program ordinarily are not eligible for this degree.

Admission. Applicants must have adequate preparation in their intended teaching field, ability to pursue graduate study, and must give evidence of a serious career interest in teaching.

Residence. A minimum of two regular semesters and one summer of full-time study or two and two-fifths residence units is required. Residence units may be earned in: (1) academic-year registration, (2) summer registration, and (3) extramural registration. Full-time study will be required in all but exceptional cases.

Special Committee. A candidate will select a Special Committee of two or more members of the Graduate School faculty, one of whom will represent the M.A.T. program and serve as chairman. Other members of the Committee are to be selected with the advice of the chairman to give adequate representation of the candidate's program.

Program of Studies. The program will be determined by the candidate and his Special Committee. It will include those courses, seminars, and other experiences in the professional area and in the teaching field or fields which are deemed most appropriate for developing competence as a teacher. Each candidate will be required to demonstrate teaching skill in a supervised field experience.

Final Examination. A candidate must pass a final examination conducted by the Special Committee. The examination may be written or oral or both. It shall be comprehensive in nature and designed to evaluate the candidate's knowledge in the teaching field as well as in the theory and practice of teaching.

Doctor of Education (Ed.D.)

Programs for this degree are designed to prepare the candidate for positions of leadership in the educational profession. Positions for which such preparation is available are administrator, coordinator, curriculum specialist, extension specialist, student services specialist, supervisor, and teacher.

Admission. Applicants must have completed a minimum of three years of successful experience appropriate to their proposed field of professional service and must show evidence of scholastic ability and other qualifications necessary for successful progress in graduate study, field experience, and professional work.

Residence. A minimum of five units of residence is required beyond the Bachelor's degree, of which at least three units must be earned in residence at Cornell. Two units of residence beyond the Master's degree or its equivalent must be earned at Cornell in regular terms, consecutive except on petition. No more than two units may be earned through extramural registration or in summer sessions at Cornell or elsewhere.

In addition to meeting residence requirements, a candidate must complete successfully one year of participation in directed field experience (see p. 12).

Special Committee. A candidate will select a Special Committee of a minimum of three members of the Graduate Faculty, one of whom will represent the Field of Education and serve as chairman. Members of the Committee are to be selected with the advice of the chairman to give adequate representation to the candidate's program.

Program of Studies. The program of studies must include a minimum of sixty-five credit hours in courses and seminars beyond the Bachelor's degree, of which thirty-five hours shall be completed beyond the Master's degree or its equivalent. It includes advanced work in each of these subjects: educational psychology, history and philosophy of education, educational measurement and statistics, and research in education. At least fifteen hours of credit must be earned in courses other than those in professional education.

12 Tuition and Fees

The transfer of credit earned in institutions other than Cornell University must be recommended by the Special Committee and approved by the dean of the Graduate School.

Directed Field Experience. In keeping with the primary emphasis in the program for the Ed.D. degree, a minimum of two consecutive academic terms of full-time experience appropriate to the candidate's field of professional service is required. This directed field experience will follow completion of two units or more of residence at Cornell beyond the Master's degree or its equivalent.

The opportunity for the field experience is to be sought by the candidate with the advice and assistance of the Special Committee. The proposed plan must be approved by the Committee as affording those practical experiences needed in acquiring competence in his intended field of professional service.

Thesis. The candidate is required to present a thesis which will give evidence of his ability to apply knowledge to a professional problem. The thesis must satisfy the Special Committee in respect to both professional proficiency and literary quality.

Examinations. Two examinations are required: (1) an admission to candidacy examination and (2) a two-part final examination. Although other members of the faculty may be invited to participate in these examinations, the Special Committee alone decides whether the candidate has passed or failed. The admission to candidacy examination is both written and oral and is given before or during the third unit of residence. It has the double purpose of determining the ability of the candidate to pursue further studies and of allowing the Special Committee and the candidate to plan a satisfactory program. The final examination is given by the Special Committee and other members of the faculty who may be invited to attend. The examination must be given in two parts—one part on the field of professional service and core studies in education (examination A), which may be taken at the end of the fourth unit of residence; and a second part on the thesis (examination B), taken after the thesis is approved by the Special Committee. Examination A

may be written or oral or both. Examinations A and B may precede or follow the period of directed field experience.

Financial Aid

A number of graduate assistantships, scholarships, and fellowships are available in the Field of Education. Requests for application forms and additional information concerning any of these opportunities should be addressed to the Field Representative for Education, Stone Hall, Cornell University, Ithaca, New York 14850. Completed applications must be received by March 15. Notification is given by April 1.

Students who are awarded graduate assistantships ordinarily spend fifteen hours a week helping with instruction, research, or extension work. Assistants are eligible for residence units in candidacy according to regulations of the graduate faculty.

The assistantship stipends vary in amount from \$3,700 to \$4,214, with appointments ranging from nine to twelve months. In the College of Agriculture and Life Sciences, and the College of Human Ecology tuition is waived for assistantship holders. Tuition is not waived in assistantships from other colleges.

Holders of fellowships and scholarships pursue a full-time course of study and are not required to render service to the University. They may engage in internship experiences.

Graduate students are eligible to apply for loans through the Office of Scholarships and Financial Aid, Day Hall, Cornell University. Assistance in obtaining part-time employment, as permitted and limited by regulations of the Graduate School, may be obtained through this Office. Residents of New York State may also obtain information from this Office concerning the Scholar Incentive Program.

Tuition and Fees

The amount of tuition depends on the student's major Field. A student whose major work is in the Field of Education pays tuition at \$400 a term if he is a New York State resident or \$500 a term if he is a nonresident.

There is also a General Fee of \$150 for

New York State residents and \$50 for nonresidents payable at the beginning of each term. This fee contributes toward the services supplied by the University libraries, health services, and the student unions, and pays a portion of the extra cost of laboratory courses and general administration.

A graduate student who returns to the University to present his thesis and to take the final examination for an advanced degree, all other work for the degree having been previously completed, must register as a "Candidate for Degree Only" and pay a fee of \$35. A thesis fee in the amount of \$30 is required of each doctoral candidate at the time of depositing the approved thesis and abstract in final form. This fee covers the cost of preparing a master microfilm of the entire thesis; publishing the abstract in the bimonthly periodical, *Dissertation Abstracts*; mailing the thesis and abstract to and from the microfilm publisher; and binding both copies of the thesis for deposit in the University Library.

Registration Deposit. An amount of \$50 must be paid by every applicant for admission after the applicant has received notice of acceptance unless the candidate has previously matriculated as a student at Cornell University. This deposit is used at the time of first registration to pay the matriculation fee, the cost of the chest x-ray, and charge for examination books, and covers certain expenses incidental to graduation if the student receives a degree. The deposit will not be refunded to any candidate who withdraws his application after May 10 or more than fifteen days after his admission approval. This fee is *not* covered by University fellowships, scholarships, or assistantships.

Special Tuition Waivers. Upon recommendation by the appropriate dean and approval of the controller in the case of each appointment in a state-supported school or college, waiver of tuition in the Graduate School may be made to a graduate assistant whose major field of study is in a state-supported school or college.

Graduate assistants on a nine- or twelve-month basis who reside here during the summer, who are registered for Summer Research for credit in the Graduate School, and who are required to give

service in their department or division during that period, may be recommended for waiver of tuition during the summer period under the above limitations. This waiver of tuition does not apply if the student registers in the Summer Session. Those who are engaged only in graduate study and not doing productive work for the department during the summer may not have their tuition waived.

Any student who is to receive less than full residence because of his employment should apply for proration of tuition on forms available at the Graduate School Office. Tuition is based on residence eligibility.

Tuition or any fees may be changed by the University Board of Trustees to take effect at any time without previous notice.

Division of Summer Session and Extramural Courses

A wide variety of credit and noncredit courses involving the faculties of the various schools and colleges of the University is available during the summer under the auspices of the Division of Summer Session. Formal credit courses similar to those given during the regular academic year are offered to graduate students, undergraduates, nondegree students, and high school students accepted for admission by an accredited college. In addition, a variety of specially designed programs is available to serve the needs of special groups by means of institutes, conferences, seminars, and short courses.

Individuals interested in part-time study during the regular academic year may register in on-campus courses through the Division of Extramural Courses, provided they are residents of the Ithaca area and are employed. Individuals are admitted on the basis of their qualifications and earn regular University credit as officially recorded by the Registrar.

Requests for additional information should be addressed to the Director, Division of Summer Session and Extramural Courses, B-20 Ives Hall.

Educational Placement

An Educational Placement Bureau is maintained in the Career, Summer Plans, and Placement Center, 14 East Avenue, for qualified Cornellians who wish to secure professional positions in elemen-

14 Educational Placement

tary schools, secondary schools, or colleges and universities.

Services include a permanent file of credentials available throughout each registrant's professional career, and up-to-date information concerning current positions, salary ranges, and certification requirements in each state.

Eligibility for registration in the Bureau is dependent on enrollment in or completion of a regular Cornell program. Credentials containing comprehensive information as to the personal and educa-

tional qualifications and experience of each registrant are compiled in conformity with standards established by the Association for School, College, and University Staffing. In order to register students should communicate with the Assistant Director for Educational Placement, Career, Summer Plans, and Placement Center.

Professor L. B. Hixon serves as the certification officer for the University. Further information may be obtained from the Department of Education, Stone Hall.

Courses of Instruction

Courses may be identified as follows: 100-199, introductory courses, primarily for freshmen and sophomores; 200-299, intermediate courses, primarily for underclassmen; 300-399, advanced courses, primarily for juniors and seniors; 400-499, primarily for seniors and graduate students; 500-599, primarily for graduate students; 600-699, seminars.

Education (Ed.) courses are taught in the Department of Education, College of Agriculture and Life Sciences, and Community Service Education (CSE) courses are taught in the Department of Community Service Education, College of Human Ecology.

Agricultural and Occupational Education

William E. Drake, chairman; Joe P. Bail, Arthur L. Berkey, Harold R. Cushman, Frederick K. T. Tom.

Ed. 331 Introduction to Teaching Agriculture. Spring term. Credit one hour. Required of juniors and others entering the directed teaching program in the senior or following year. M 2-4:25. Mr. Cushman.

An introduction to the origin, development, objectives, course of study, and method of teaching agriculture in secondary schools, and to individual experience programs.

Ed. 432 Methods, Materials, and Directed Practice in Teaching Agriculture in the Secondary School. Fall term. Credit nine hours. Staff.

Directed participation in off-campus centers in the specific and related problems of teaching agriculture on the junior and senior high school levels which includes adjustment in the school and community; evaluation of area resources, materials of instruction, and school

facilities; organization and development of courses of study; launching and directing work experience programs; planning for and teaching all-day classes; advising occupational youth organizations; and other problems relating to development of a balanced program.

Ed. 433 Special Problems in Agricultural Education. Spring term. Credit one or two hours. S/U grades optional. Graduate and undergraduate. Th 1:25. Staff.

The purpose is to provide students an opportunity to study individually or as a group selected problems in agricultural education.

Ed. 434 Organization and Direction of Out-of-School Programs. Fall term. Credit three hours. Mr. Cushman.

Emphasis will be placed on solving the problems encountered in such phases of the out-of-school program as determining instructional needs and planning programs of instruction, teaching in groups, giving individual instruction, organizing and advising the local association, and evaluating the out-of-school program.

Ed. 531 Supervision in Occupational Education. Fall term. Credit two hours. Given in alternate years. Open to students with experience in teaching or by permission. W 2:30-4:25. Mr. Bail.

The function of supervision, program planning, and supervisory techniques as applied to state programs in occupational education.

Ed. 532 Advanced Methods and Materials of Teaching Agricultural and Occupational Education. Spring term. Credit two or three hours. M 2:30-4:25. Mr. Berkey.

Consideration is given to an analysis of selected teaching techniques and to the selection, preparation, and use of instructional materials.

Ed. 533 Developing Curriculum in Agricultural and Occupational Education. Fall term. Credit three hours. M F 1:25–2:55. Mr. Drake. Guiding principles, objectives, and sources of information will be developed for planning the curriculum. Consideration will be given to principles, meanings, and functions of occupational experience programs and how they are planned, developed, and used as a means of instruction.

Ed. 534 Education for Leadership of Youth and Adult Groups. Fall term. Credit two hours. F 1:25–2:30. Mr. Cushman. A consideration of the principles involved in organizing and conducting out-of-school programs for youth and adults.

[Ed. 535 Planning and Conducting Programs of Teacher Preparation in Agriculture. Fall term. Credit two hours. Given in alternate years. Mr. Tom. Not given in 1972–73. Open to persons with teaching experience in agriculture who are preparing for or are engaged in the preparation of teachers or related educational service.]

Ed. 536 The Organization and Administration of Occupational Education. Spring term. Credit two hours. Offered in alternate years. W 2:30–4:25. Mr. Cushman. Designed for teachers, high school principals, teacher trainers, supervisors, and others who are responsible for the administration of occupational programs or who wish to qualify for this responsibility. Emphasis will be placed on interpreting vocational legislation and on problems of administration at the local and state levels.

Ed. 538 Teaching General Agriculture in the Secondary School. Spring term. Credit two hours. F 4:15–6. Mr. Tom. The organization, purpose, and content of courses in agriculture in junior and senior high schools to serve those who elect to study agriculture for its general educational values in preparation for everyday living.

[Ed. 539 Evaluating Programs of Occupational Education. Spring term. Credit two hours. Given in alternate years. Open to students with experience in teaching or by permission. T 1:25–3:20. Mr. Drake. Not given in 1972–73. Students will study objectives and evaluative criteria and develop criteria and procedures for evaluation of programs of occupational education in the secondary and post-secondary schools.]

Ed. 630 Seminar in Agricultural Education. Spring term. Credit one hour. S/U grades exclusively. Th 2:30–4:25. Staff. Recommended for Master's degree candidates who have had teaching experience and doctoral candidates with majors and minors in agricultural education. The seminar will be

primarily centered in current problems and research in the field not included in other course work.

Community Service Education

Irving Lazar, chairman; S. Morton Altman, Donald J. Barr, Robert J. Babcock, Sara E. Blackwell, Herbert A. Brenden, Alice Davey, Irene I. Imbler, Marian E. Minot, Helen Y. Nelson, Lucinda A. Noble, Kathleen Rhodes, Andrew A. Sorensen, Joan Wright.

CSE 203 Exploration in Individual Behavioral Change. Spring term. Credit three hours. M 1:25–2:15, W 1:25–3:05.

Designed as a basic course in the theory of individual behavioral change and as an introduction to the facilitative processes in helping relationships. Emphasis will be placed upon the theories and dynamics of behavioral change, role definition, self-understanding, and personal growth. The use of one-to-one helping techniques, role playing, and dyad and triad experiences will be included.

CSE 300 Special Studies for Undergraduates. Fall and spring terms. Credit and hours to be arranged. Students must obtain special forms from their advisers. Department faculty. This course is designed to provide for a) independent study by an individual student in advanced work not otherwise provided in the department; or b) study, on an experimental basis, with a group of students in advanced work not otherwise provided in the department.

CSE 302 Organization of Community Services. Fall term. Credit four hours. Prerequisite: suitable community experience or organized community experience arranged through instructor, i.e., CSE 400, one credit. The course focuses on the comparative analysis of community services. Attention will be directed to assessment of the need, and the development and use of community resources, particularly in relation to their educational function. The relationship among families, community services, and the governmental structure will be examined as well as the roles and interrelationships of individuals and groups within these systems. Effectiveness of the delivery of these services in relation to their functions will also be discussed.

CSE 325 Health Institutions and Agencies as Providers of Family Health Care Services. Fall term. Credit three hours. S/U grades optional.

Developments in the health field that affect the availability and kinds of health services. Emphasis is placed on interrelationships be-

tween institutions and agencies, and the part each can play in prevention, diagnosis, and treatment of disease and disability. Visits to institutions and contacts with local agencies will be made.

CSE 330 Epidemiology and Community Health. Spring term. Credit three hours. Mr. Sorensen.

Epidemiological and ecological approaches to the problems of man in achieving health in interaction with his physical, social, and mental environment. The course will have two foci: first, critical health problems related to drug abuse (including alcohol and tobacco); second, problems of urban living, environmental health, and the provision of community health care services by public agencies.

CSE 340 Clinical Analysis of Teaching. Fall and spring terms. Credit one hour. Prerequisite or parallel: Education 411. Miss Minot. Teaching episodes are analyzed in terms of principles of educational psychology. Emphasis is on a clinical analysis of teaching strategies and classroom interaction. Micro-teaching gives students an opportunity to develop technical skills of teaching and to develop self-evaluative ability in the analysis of teaching.

CSE 370 Issues in Social Welfare and the Current Social Work Scene. Spring term. Credit three hours. Open to sophomores, juniors, and seniors. Mr. Altman.

Introduction to the field of social welfare and the various dimensions of social work practice. The subject matter will be handled in three phases. *Phase I:* A brief history and philosophy of American social welfare traced from the origins of English poor law. Glimpses of social welfare developments and programs through various periods in American history, e.g. from the colonial period to the Civil War; expanding industrialism 1865–1890, age of reform 1890–1914, etc. *Phase II:* A critical examination of current and significant social welfare issues—public welfare; social security; exploding metropolis—housing; urban development, suburbia; deviant behavior; child and family welfare; poverty and services developed to deal with it; civil rights, etc. *Phase III:* the social work profession—fields of practice; public-private agency relationships; social policy and planning; programs focusing on prevention; programs focusing on delivery of services. Field observations will be included.

CSE 392 Research Design and Analysis. Fall term. Credit three hours. Prerequisite: HDFS 115 or basic course in psychology. Miss Blackwell.

Basic concepts in research design and analysis are considered. Assignments and discussion focus on helping students to read research reports with greater understanding

and to contribute more effectively to program evaluation and other research enterprises. Actual experience with segments of evaluation/research include, among others: analysis of reports, variable definition and measurement, and data analysis and interpretation.

CSE 400 Special Studies for Undergraduates. Fall and spring terms. Credit and hours to be arranged. Students must obtain special forms from their advisers. Department faculty.

This course is designed to provide for a) independent study by an individual student in advanced work not otherwise provided in the department; or b) study, on an experimental basis, with a group of students in advanced work not otherwise provided in the department.

CSE 404 Identification and Use of Intervention Strategies with Individuals and Groups. Spring term. Credit four hours.

Concepts related to planned change; the change agent; the client system; application of valid knowledge to the client's problems; mutual goal setting; planned action; change agent-client relationships. Types of strategies for behavioral and organizational change. Mechanisms of change and the role of the change agent; creating motivation to change, determining family and individual goals, developing new responses; identifying components of change; stabilizing and integrating change; relationships between individual and organizational change; value dilemmas of the change agent. Seminar and field observation consistent with each student's professional interests.

CSE 411 Introduction to Adult Education. Fall term. Credit three hours. S/U grades optional. W F 2:30–3:55. Miss Imbler.

Focuses on the broad aspects of adult education, types and scope of adult education programs, philosophy and principles of adult education, and community and organizational factors affecting development of adult programs. Opportunity will be provided for field trips for observation of adult education programs in business and industry and in community organizations and agencies.

CSE 416 The Facilitative Processes and the Helping Relationship. Spring term. Credit three hours. S/U grades optional. Enrollment by permission of instructor before preregistration. Limited to 20 students. Small group laboratory. Miss Imbler.

Designed for those entering the helping professions, such as education, social services, and health. Concentration will be on theory, research, and training in the facilitative processes in the helping relationship. The model to be used as a basis for training will be that developed by Carkhuff. Training will include use of role playing, dyad and triad skill practice exercises, aural and video tapes. Each

class member will participate in a small group laboratory during which emphasis will be placed upon the development of the facilitative attitudes and skills. Students will collaborate with the instructor in a research project in connection with the course.

CSE 441 The Art of Teaching: Workshop. Fall and spring terms. Credit two hours. To be scheduled concurrently with CSE 442. A workshop is conducted at the beginning of the term, and the independent study period is used for directed study related to student teaching. Hours to be arranged.

Consideration is given to major concerns related to teaching at the secondary level: implementation of plans, evaluation, department management, space and equipment, action research, and philosophy of teaching home economics and related subjects.

CSE 442 The Art of Teaching: Student Teaching. Fall and spring terms. Credit six hours.

Field experience according to selected option.

CSE 443 Critical Issues in Education. Spring term. Credit two hours. Prerequisite or corequisite: CSE 441 and 442. Hours to be arranged.

An examination of current issues in education. Analysis of the historical, philosophical, social, and political factors that affect the issues.

CSE 500 Special Problems for Graduate Students. Fall and spring terms. Credit and hours by arrangement. Department faculty.

For students recommended by their chairmen and approved by the instructor in charge for independent, advanced work.

CSE 502 Organization of Community Services. Fall term. Credit four hours. Prerequisite, suitable community experience or organized community experience arranged through instructor, i.e., CSE 500, one credit. Mr. Altman and Mrs. Wright.

The course focuses on the comparative analysis of community services. Attention will be directed to assessment of the need and the development and use of community resources, particularly in relation to their educational function. The relationship among families, community services and the governmental structure will be examined as well as the roles and interrelationships of individuals and groups within these systems. Effectiveness of the delivery of these services in relation to their functions will also be discussed.

CSE 503 Exploration in Individual Behavioral Change. Spring term. Credit four hours. Miss Imbler and Mr. Brenden.

Designed to provide a systematic analysis of theories of individual behavioral change and the learning process. Introduction to facilitative processes in the helping relationship—

emphasis will be placed upon the theories and dynamics of behavioral change, role definition, self-understanding, and personal growth. Discussion of one-to-one helping techniques, role playing, and dyad and triad experiences will be included.

CSE 504 Identification and Use of Intervention Strategies with Individuals and Groups. Spring term. Credit four hours. Miss Minot, Mr. Barr, and Mr. Sorensen.

Concepts related to planned change; the change agent; the client system; application of valid knowledge to the client's problems; mutual goal setting; planned action; change agent-client relationships. Types of strategies for behavioral and organizational change. Mechanisms of change and the role of the change agent; creating motivation to change, determining family and individual goals, developing new responses; identifying components of behavior and level of achievement required for individual change; stabilizing and integrating change; relationships between individual and organizational change; value dilemmas of the change agent. Students will undertake a relevant field problem in their area of interest.

CSE 510 Seminar in Adult Education. Fall term. Credit three hours. May be repeated with permission of the instructor. Miss Imbler. The seminar is designed to deal with significant problem areas in adult education, such as philosophy of adult education, the teaching-learning process for adults, special problems of the disadvantaged adult learner. Implications of theory and research in the problem area will be important considerations. One specific problem area will be considered each time the seminar is offered, the particular area to be announced at preregistration time.

CSE 516 The Facilitative Processes and the Helping Relationship. Spring term. Credit four hours. Miss Imbler.

Concentration on theory and research in facilitating the helping relationship. Each class member will participate in a group laboratory in order to develop helping skills and will undertake a research project in the area.

CSE 530 Seminar in Human Services Training. Fall term. Credit one to three hours. Mrs. Wright and Miss Noble.

Weekly seminar and independent study related to the training of paraprofessionals in human services; training of professionals and the service team; development of job opportunities and career ladders; development and evaluation of appropriate curricula and teaching-learning techniques; development of linkages with community agencies and other institutions of higher education; and evaluation of progress toward each of these goals.

CSE 531 Supervision of Paraprofessionals

in Human Services. Spring term. Credit three hours. Mrs. Wright.

For persons who anticipate working with paraprofessionals in community service settings. The course will focus on the nature of professionalization; roots of paraprofessionalism; the New Careers concept; models of utilization of paraprofessionals; recruitment, selection, training, and evaluation of paraprofessionals; and team-building skills required by the professional. Attention will also be given to organizational practices that facilitate differentiated staffing.

CSE 550 Comparative Studies of Family Education Services. Fall term. Credit three hours. Miss Rhodes.

Factors related to the development of educational programs for improving family living conditions in differing cultures. Analysis of needs and evaluation of methods of approach in countries at varying levels of development.

CSE 570 Seminar in Higher Education. Fall term. Credit three hours. S/U grades optional. Hours to be arranged. Miss Rhodes.

CSE 580 Seminar in Community Service Education. Fall and spring terms. Credit one hour. May be repeated with permission of instructor. Department faculty.

An informal seminar for graduate students and faculty. One or two major topics related to community components and dynamics or the provision of education services to be considered each term.

CSE 584 Curriculum Development. (See p. 25.)

CSE 590 Evaluation. (See p. 25.)

CSE 599 Master's Thesis and Research. Fall and spring terms. Credit and hours by arrangement. Graduate faculty.

CSE 620-621 Strategies for Community Change. Fall and spring terms. Credit three hours each term.

The application of behavioral science theory and method to planned organizational change. Strategies of social change and their application to community situations: collaboration, conflict, and resistance. Field observation in community situation undergoing planned change and analysis of strategies in process. Second semester taken in conjunction with field experience in community. Opportunity to participate in change process and evaluation research on ongoing community project study of relevant human problems related to community change, e.g., housing, education, and health. Experience in diagnosis of ongoing problems related to community change and in planning appropriate intervention strategies.

[CSE 625 Internship. Spring term. Credit six hours. Not given in 1972-73.

Assignment to an agency or institution with responsibility for personal performance in a role which provides opportunity for participation in planning, implementation, and evaluation of the ongoing program. Supervision by faculty and agency personnel.]

CSE 699 Doctoral Thesis and Research. Fall and spring terms. Credit and hours by arrangement. Graduate faculty.

CSE 690 Seminar in Evaluation. (See p. 26.)

Curriculum and Instruction

Helen L. Wardeberg, chairman;
Barry B. Adams, Joe P. Bail, Arthur L. Berkey,
Walter F. Brautigan, W. Lambert Brittain,
Robert L. Bruce, William E. Drake,
Harrison A. Geiselman, D. Bob Gowin,
Marion Minot, Benjamin Nichols,
Joseph D. Novak, Walter J. Pauk,
Kathleen Rhodes, Richard E. Ripple,
Verne N. Rockcastle, John Wilcox.

Ed. 432 Methods, Materials, and Directed Practice in Teaching Agriculture in the Secondary Schools. Fall term. Credit nine hours. Staff in agricultural education. (See p. 15 for description.)

Ed. 391 The Junior High School. Fall and spring terms. Credit three hours. Th 1:30-3:30. Mr. Stutz and staff.

An introduction to teaching in junior high schools with emphasis on innovative modes of teaching and curriculum design. Attention to be given to the needs and characteristics of early adolescence, affective values, goals and curriculum development, instruction and evaluation, the societal context of the school, and current developments in junior high school education. Each student will be expected to spend time in the junior high schools and to teach briefly if it can be arranged.

Ed. 407 The Teaching of Elementary-School Science. Fall term. Credit three hours. Registration by permission. Mr. Rockcastle. (See p. 26 for description.)

Ed. 408 Methods of Teaching Science in Secondary Schools. Fall or spring term. Credit three hours. Registration by permission. Mr. Brautigan and staff. (See p. 26 for description.)

Ed. 409 Practice in Teaching Science in Secondary Schools. Fall or spring term. Credit six or twelve hours. Prerequisite: 408 and permission of the instructor. For seniors and graduate students. Hours to be arranged. Mr. Brautigan and staff. (See p. 27 for description.)

Ed. 444 Teaching of Secondary Mathematics. Spring term. Credit three hours. T Th 4-5:15. Mr. Geiselmann.

Attention will be given to research in mathematics education and to recent proposals for curriculum revision. Special interests of the students will serve as a guide for the further selection of topics.

Ed. 445 Teaching Reading and Study Skills. Spring term. Limited to seniors and graduate students. Credit three hours. Mr. Pauk.

For teachers, administrators, guidance counselors, and supervisors. Pertinent research as well as the psychology and philosophy of developmental reading and study skills will be examined. Teaching methods and sample materials for classroom use will be demonstrated and discussed.

Ed. 473 Contemporary Philosophy of Education. Spring term. Credit three hours. M W 12:20-2:20. Mr. Gowin.

Topic for 1972-73: Structure of Knowledge.

Ed. 509 Development of Curriculum in Science. Spring term. Credit three hours. For graduate students interested in elementary, secondary, or college science teaching. Limited to 20 students. M 1:25-4:25. Mr. Novak.

(See p. 27 for description.)

Ed. 533 Developing Curriculum in Agricultural and Occupational Education. Fall term. Credit three hours. M F 1:25-2:55. Mr. Drake.

(See p. 16 for description.)

Ed. 540 The Art of Teaching. Fall and spring term. Credit and hours arranged. S/U grades optional. For students enrolled in teacher education programs. Students may register only with consent of instructor. Miss Wardeberg.

Ed. 545 The Curriculum of American Schools. Fall term. Credit three hours. Limited to graduate students.

A survey of the basic elements involved in making curriculum decisions and an examination of contemporary curriculum developments in elementary and secondary schools.

[Ed. 546 Teaching Reading and Language Skills. Fall term. Credit three hours. Not given in 1972-73.

Materials and techniques in teaching the language arts in the elementary schools; special emphasis on the teaching of reading.]

Ed. 547 Seminar in Elementary Education. Fall term. Credit and hours as arranged. S/U grades optional. Miss Wardeberg.

A problems seminar to study current problems and research in the field of elementary education.

Ed. 565 Supervision of Instruction. Spring term. Credit three hours. Miss Wardeberg.

(See p. 21 for description.)

Ed. 573 Structure of Knowledge. Spring term. Credit three hours. M W 11:15. Mr. Gowin.

The concept of the structure of a discipline and the development of a systematic method for the analysis of knowledge claims are the main concerns of this seminar. These concerns are related to the nature of teaching, curriculum theory and research, educational policy, and nontraditional forms of educational practice.

Ed. 645 Seminar in Curriculum Theory and Research. Spring term. Credit three hours. S/U grades optional. Registration by permission of the instructor. T 1:25-3:20. Members of the staff.

CSE 572 The Teacher Educator in Home Economics.

(See p. 25 for description.)

CSE 584 Curriculum Development.

(See p. 25 for description.)

Educational Administration

Lawrence B. Hixon, chairman; Joe P. Bail, Robert L. Bruce, Joan L. Egner, Emil J. Haller, Helen L. Wardeberg, John Wilcox.

Ed. 527 Evaluation for Program Management. Fall term. Credit three hours. S/U grades optional. Time to be arranged. Mr. Bruce.

(See p. 23 for description.)

Ed. 531 Supervision in Occupational Education. Fall term. Credit two hours. Offered in alternate years. Open to students with experience in teaching, or by permission. W 2:30-4:25. Mr. Bail.

(See p. 15 for description.)

Ed. 561 Administration of Educational Organizations. Fall term. Credit three hours. M W 1:25-3. Mr. Haller.

A consideration of current approaches to understanding administration and organizations, and their application to the educational setting.

Ed. 562 The Principalship. Spring term. Credit three hours. For graduate students only. Th 4-6. Mr. Hixon and staff.

Organized to enable recognition and cognition of the administrative functions essential to effective elementary and secondary schools. Analysis will include the elementary and secondary school as institutions, innovation in organization and curriculum, administration of instructional and noninstructional personnel, and community relationships.

Ed. 563 Sociology of Education. Spring term. Credit three hours. M W 1:25-3. Mr. Haller.

Introduction to major themes in the contemporary literature in the sociology of education. These include social stratification and education, the school as an organization and as an institution, minority groups in the school, socialization, professionalization of teaching, bureaucratization, the teacher-student roles, and the career patterns of teachers.

Ed. 564 Economic Issues in Education. Fall term. Credit three hours. M 2:30–4:25. Staff. Introduction to problems of resource procurement and allocation in education. Attention will be focused on existing and alternative strategies of fiscal support for schools and new management techniques for allocating such resources.

Ed. 565 Supervision of Instruction. Spring term. Credit three hours. T 2–4. Miss Wardeberg.

A basic course in the nature and scope of supervision. Open to those already in supervisory positions, either in school work or elsewhere, and experienced persons aspiring to become supervisors.

Ed. 567 Education Law. Fall term. Credit three hours. T 2:30–4:25. Mr. Hixon. Review and analysis of federal and state legislation, court decisions, opinion, and regulations which affect educational institutions.

Ed. 569 Personnel Administration. Fall term. Credit three hours. For graduate students only. Th 4–6. Mrs. Egner.

Designed to provide an introduction to modern psychological and sociological perspectives of personnel administration. Three purposes are paramount: (1) to acquaint the student with a variety of ways of conceiving the problems of personnel administration, (2) to acquaint the student with relevant research, and (3) to develop facility in the analysis of conceptual schemes and research projects.

Ed. 663 Seminar in the Sociology of Education. Fall term. Credit three hours. Consent of instructor required. T 2:30–4:30. Mr. Haller. Consideration of selected topics in the sociology of education.

Ed. 668 Seminar in Educational Administration. Spring term. Credit three hours. Prerequisite: consent of the instructor. Time to be arranged. Mrs. Egner.

Consideration of problems and policy issues in public schools and higher education.

Ed. 669 Studies in Educational Administration. Fall and spring terms. Credit one hour. For graduate students only. Consent of instructor required. Th 4–6. Mr. Haller and staff. This course is intended to provide beginning graduate students in educational administration with a critical introduction to research topics in this field and to inform them of the potential of those topics for thesis research.

Educational Psychology and Measurement

Richard E. Ripple, chairman;
Howard G. Andrus, Marvin D. Glock,
Harry Levin, James B. Maas,
George W. McConkie, Jason Millman.

Ed. 110 General Psychology. Fall or spring term. Credit three hours. May not be taken for credit by students who have had Psychology 101 or equivalent. Two lectures, a testing and demonstration period, and one discussion section each week. Lectures and testing period M W F 10:10. Discussion sections Th or F, 8, 9:05, 10:10, 11:15, 12:20, 1:25, 2:30, or 3:35. Mr. McConkie.

A survey of research and theories in the field of psychology. Areas of emphasis include research methods, perception, learning and memory, language and thought, motivation and emotion, individual differences and psychological testing, personality development, and abnormal psychology.

Ed. 411 Educational Psychology. Fall or spring term. Credit three hours. Prerequisite: an introductory course in psychology. Designed for students in teaching programs and/or those interested in the educational process. Fall term. M W F 11:15. Mr. Ripple. Special section for agricultural education majors, time to be arranged. Spring term, time to be arranged. Mr. Glock. Tutoring recommended during spring term. (Equivalent to Psychology 103.)

Consideration of the outstanding facts and principles of psychology bearing upon classroom problems.

Ed. 417 Psychology of Adolescence. Spring term. Credit three hours. Freshmen and sophomores not admitted. Prerequisite: an introductory course in psychology. Enrollment limited to 100 students. T Th 1:25–3:20. Mr. Ripple.

A survey of the nature of adolescent growth and development with emphasis on some of the causal factors pertaining to adolescent behavior.

Ed. 452 Interpretation of Statistics Used in Education. Fall and spring terms. Credit one hour. T 12:20. Will be offered in the spring term only to those students concurrently enrolled in 453, the hour to be arranged. Mr. Millman.

(See p. 22 for description.)

Ed. 453 Introduction to Educational Statistics. Spring term. Credit three hours. Prerequisite: course 452 (may be elected concurrently) or permission of the instructor. T Th 8–9:55. Mr. Millman.

(See p. 22 for description.)

Ed. 511 Educational Psychology. Fall term. Credit three hours. Prerequisite: introduction to psychology and permission of the instructor. M W F 11:15. Mr. Ripple.

A basic course in educational psychology for graduate students.

Ed. 551 Educational Measurement. Spring term. Credit three hours. Not offered every year. Permission of the instructor required. Hours to be arranged. Mr. Glock.

A study of the construction of achievement tests and the use of aptitude tests, achievement tests, and other measuring instruments in the classification and guidance of pupils and improvement of instruction.

Ed. 555 Use and Interpretation of Tests in Guidance and Personnel Administration. Fall term. Credit three hours. Th 4-6. Mr. Andrus. Open to students in guidance or personnel administration and to classroom teachers who expect to work with standardized group tests. Deals with the historical development, use and interpretation of aptitude tests as a basis for guidance and selection in public schools, colleges, and/or industry. Designed to meet the New York State certification for guidance counselors.

Ed. 599 Methods of Educational Inquiry. Fall term. Credit three hours. Prerequisite: one course in statistics or 452 elected concurrently. T Th 2:30-4. Mr. Millman and staff. (See p. 23 for description.)

Ed. 613 Seminar in Educational Psychology. Fall term. Credit three hours. Permission of instructor required. Hours to be arranged. Mr. Glock.

Theoretical issues in the teaching of reading.

Ed. 617 Seminar in Learning and Memory. Fall term. Credit three hours. Prerequisite: Psychology 306 or equivalent. Hours to be arranged. Mr. McConkie.

A study of current issues in the learning, retention, and transfer of verbal information.

Ed. 618 Seminar in Educational Psychology. Spring term. Credit three hours. Permission of the instructor required. Hours to be arranged. Mr. Ripple.

Emphasis on theoretical considerations of various areas in educational psychology. Primarily for doctoral students.

Psych. 103 Educational Psychology. Spring term. Credit three hours. Prerequisite: an introductory course in psychology. Equivalent of 411. Mr. Levin.

Other related courses are offered in the departments of psychology, human development and family studies, anthropology, sociology, and in the School of Industrial and Labor Relations.

Educational Research Methodology

Jason Millman, chairman; Robert L. Bruce, Richard B. Darlington, D. Bob Gowin, Kenneth A. Strike.

Ed. 452 Interpretation of Statistics Used in Education. Fall and spring terms. Credit one hour. T 12:20. Offered in the spring term only to those students concurrently enrolled in 453, hour to be arranged. Mr. Millman.

A brief introduction to the vocabulary and symbolism used in reporting empirical research in education. Both univariate and multivariate statistical procedures will be covered from an intuitive point of view.

Ed. 453 Introduction to Educational Statistics. Spring term. Credit three hours. Prerequisite: course 452 (may be elected concurrently), or permission of the instructor. T Th 8-9:55. Mr. Millman.

A study of common statistical procedures encountered in educational literature and research. The course includes the mathematical bases, computation, and interpretation of univariate and multivariate descriptive and inferential statistics.

Ed. 527 Evaluation for Program Management. Fall term. Credit three hours. S/U grades optional. Mr. Bruce. (See p. 23 for description.)

Ed. 551 Educational Measurement. Spring term. Credit three hours. Permission of the instructor required. Not offered every year. Mr. Glock.

(See p. 22 for description.)

Ed. 599 Methods of Educational Inquiry. Fall term. Credit three hours. Prerequisite: one course in statistics or 452 elected concurrently. T Th 2:30-4. Mr. Millman and staff. An introduction to the methods that underlie the conduct of significant research in education. Emphasis will be placed upon describing and analyzing such procedures as forming concepts, developing educational products, making observations and measurements, performing experiments, building models and theories, providing explanations, and making predictions. For graduate students in their first year of residence.

Ed. 616 Seminar in Educational Research. Fall term. Credit three hours. Prerequisite: 453 and 599 or permission of the instructor. Time to be arranged. Mr. Millman. Topic to be announced.

CSE 690 Seminar in Evaluation. Spring term. Credit two hours. Prerequisite: CSE 590 and Education 453 or equivalents. Miss Blackwell. (See p. 26 for description.)

Ed. 698 Practicum in Educational Research. Fall and spring terms. Three to six hours credit per term. Members of the staff.

Participation in a research project under the direction of the principal investigator of said project. Level of responsibility will increase with the experience and capability of the candidate, the eventual goal being his assumption of responsibility for a portion of the research.

Ed. 699 Conceptual Problems in Educational Inquiry. Fall term. Credit three hours. Prerequisite: 599 or equivalent, or permission of instructor. Primarily for doctoral candidates in their second year of residence. W 2:30-4:30. Messrs. Gowin and Strike.

An examination of such concepts as causation, operationism, validity, reliability, hypothetical construct, generalization, explanation, probability, and hypothetico-deductive method.

Psych. 401 Psychological Testing I. Fall term. Credit four hours. Mr. Darlington.

Psych. 402 Psychological Testing II. Spring term. Credit four hours. Mr. Darlington.

[Psych. 475 Analysis of Nonexperimental Data. Fall term. Credit four hours. Mr. Darlington. Not given in 1972-73.]

Extension and Continuing Education

J. Paul Leagans, chairman;
George J. Broadwell, Robert L. Bruce,
Arthur E. Durfee, Irene I. Imbler.

Ed. 522 Educating for Community Action. Spring term. Credit three hours. Open to juniors and seniors by consent. W 11:15-1:10; F 11:15. Mr. Bruce.

Emphasis is on the design and execution of the educational aspects of community action programs. The course deals with the identification and statement of educational goals, selection of teaching strategies, and evaluation of outcomes.

Ed. 523 Administration of Continuing Education Programs. Spring term. Credit three hours. W 1:25-4. Messrs. Broadwell and Durfee.

An application of the principles of administration and supervision to the problems of organizing and operating continuing education programs. Emphasis is on identifying, describing and analyzing alternative models for planning, organizing, staffing, directing, controlling, and financing an adult education enterprise.

Ed. 524 Designing Extension and Continuing Education Programs. Fall term. Credit three hours. T 1:25-4. Mr. Leagans.

Analysis of current theories, concepts, prin-

ciples, and procedures central in the process of developing programs for the continuing education of adults. Emphasis is placed on such major problems as situation analysis, selecting objectives from alternatives, creating support at macro level, organizing program resources at micro level, and planning for program execution.

Ed. 525 Educational Communication. Spring term. Credit three hours. T 1:25-4. Mr. Leagans.

Emphasizes the centrality of useful technology and effective communication in continuing education programs. Emerging models of the communication process are reviewed as a framework for analyzing major elements including communicator credibility, program content, messages, organization and use of transmission channels, message treatment, audience identification, feedback, and the design of operation communication programs.

Ed. 526 Practicum in Continuing Education. Continuous fall and spring. Credit one to three hours. Open only to graduate majors and minors in extension and continuing education. Hours to be arranged. Staff.

Provides opportunity for students to supplement the formal aspects of their curriculum through systematic participation in an ongoing continuing education program.

Ed. 527 Evaluation for Program Management. Fall term. Credit three hours. S/U grades optional. Time to be arranged. Mr. Bruce.

Program evaluation is treated as a part of the overall task of making program management decisions. Primary attention is given to educational and other community change programs, but inferences to other program management tasks are possible. The course has three aspects: (1) a series of lecture-discussions; (2) a continuing workshop; and (3) individual student evaluation projects.

Ed. 626 Divisional Seminar. Continuous fall and spring terms. Credit one hour each term, optional. For all majors in extension and continuing education and community service education, and open to minors. Staff.

Provides opportunity for divisional students and staff jointly to analyze and reflect on current professional issues.

Ed. 627 Seminar: Behavioral Change in International Rural Modernization. Spring term. Credit two hours. Mr. Leagans.

Analysis of concepts and strategies for repatterning human behavior at both the macro and micro levels. Changes in human behavior are viewed as a dependent variable in the rural development process.

Ed. 628 Seminar: Current Problems and Issues in Extension Education. Spring term. Credit two hours. Open by permission of the instructor to graduate students in extension

education and other fields with special relevance to the seminar topic. Staff.
A major area of concern to extension education will be selected for intensive study by participating students and faculty.

Guidance and Personnel Administration

Howard G. Andrus, Dalva Hedlund.

Ed. 580 Student Culture in the American College. Spring term. Prerequisite: permission of the instructor. Credit three hours. T Th 1:25-2:45.

Study of the student culture in the American college with emphasis on current research.

Ed. 581 Student Personnel Administration. Fall term. Credit three hours. Prerequisite: permission of the instructor. T Th 1:25-2:45. Analysis of the objectives, functions, and organization of student personnel services in higher education. Emphasis on behavioral science theories supporting student personnel administration.

Ed. 582 Educational and Vocational Guidance. Fall term. Credit two hours. For graduate students only. T 4:15-6.

Principles and practices of educational and vocational guidance. Historical and theoretical background of the guidance movement; educational, vocational, and community information needed; the study of the individual; group methods; counseling; placement and follow-up; and the organization, administration, and appraisal of guidance programs.

Ed. 583 Counseling. Fall term. Credit three hours. Prerequisite: 555 or equivalent (may be taken concurrently) and consent of instructor. Mr. Hedlund.

The counseling process viewed from selected theoretical systems. Differentiation of the counselor's role and counseling objectives between systems through the use of case studies.

Ed. 584 Group Counseling. Spring term. Credit three hours. Prerequisite: consent of instructor. Mr. Hedlund.

Techniques and principles of counseling with groups. Emphasis on the relationship between types of counselor interventions and the development of group processes.

Ed. 602 Field Laboratory in Student Personnel Administration. Either term. Credit and hours to be arranged. Prerequisite: permission of the instructor. Members of the staff. Directed field project in student personnel administration.

Ed. 681 Seminar in Student Personnel Administration. Either term. S/U grades op-

tional. Credit as arranged. Prerequisite: permission of the instructor. F 9:05-11. Mr. Hedlund.
Topic varies.

The following courses are not ordinarily offered on campus during the academic year, but they are offered in alternate summer sessions.

Ed. 585 Occupational and Educational Information. Credit four hours.

Ed. 586 Organization and Administration of Guidance Programs. Credit two hours.

Ed. 587 Practicum in Measurement and Appraisal for Counselors. Credit two hours.

Ed. 588 Case Studies in Counseling. Credit two hours.

History, Philosophy, and Sociology of Education

D. Bob Gowin, chairman; Emil J. Haller, Kenneth A. Strike, Frederick H. Stutz.

Ed. 470 Educational Issues. Every term. Credit three hours. Registration in afternoon sections limited to 25 students. M W F 10:10 or T Th 2:30-4. Messrs. Gowin, Strike, and Stutz.

A critical examination of theories, policies, and practices.

[**Ed. 471 Logic in Teaching.** Spring term. Credit three hours. Open to graduates and advanced undergraduates. T Th 2:30-4. Mr. Strike. Not given in 1972-73.

A consideration of definition, explanation, proof, and the nature of knowledge as they bear upon classroom teaching.]

Ed. 472 Philosophers on Education. Fall term. Credit three hours. For graduates and advanced undergraduates. Admission by consent only. M W 2:30-4.

Selected writings by such philosophers as Plato, Descartes, Rousseau, and Dewey will be examined in their own right and for the light they throw on the persistent problems in education.

Ed. 473 Contemporary Philosophy of Education. Spring term. Credit three hours. M W 12:20-2:20. Mr. Gowin.

Topic for 1972-73: Structure of Knowledge.

Ed. 475 Freedom and Authority in Education. Spring term. Credit three hours. Given in alternate years. T Th 2:30-4. Mr. Strike.

An analysis of the concept of freedom in both political and psychological contexts and an application of the resulting analysis to problems of freedom and authority in education.

Ed. 563 Sociology of Education. Spring term. Credit three hours. M W 2:30-4. Mr. Haller.

(See p. 20 for description.)

Ed. 573 Structure of Knowledge. Spring term. Credit three hours. M W 11:15. Mr. Gowin.

(See p. 20 for description.)

[Ed. 574 History of American Education. Fall term. Credit three hours. For graduate students. Seniors admitted with permission of the instructor. M 4-6. Mr. Stutz. Not given in 1972-73.

An examination of the role of education in shaping American society. Chief emphasis will be on the period from 1820 to 1914.]

Ed. 578 Comparative Education. Fall term. Credit three hours. For graduate students. M 4-6. Mr. Stutz.

A comparative treatment of several national systems of education from a historical perspective.

Ed. 598 Education as a Field for Inquiry. Fall term. Credit three hours. For graduate students. W 2:30-4:30.

Designed primarily for students without previous training or experience in the field of education, this course is intended to provide insight into the nature and content of the field to which their research efforts will be directed. The course will deal with the structure of the educational enterprise, its history, its objectives and the ways it seeks to achieve them, its main concerns, emphases, and sources of strain.

Ed. 663 Seminar in the Sociology of Education. Fall term. Credit three hours. T 2:30-4:30. Consent of instructor required. Mr. Haller.

Consideration of selected topics in the sociology of education.

Ed. 670 Seminar in the College and University. Spring term. Credit three hours. S/U grades optional. T Th 12:20-2:20. Mr. Gowin and staff.

Conditions of disciplined inquiry in higher education.

Ed. 671 Seminar: Analysis of Educational Concepts. Spring term. Credit three hours. Admission by consent. W 10:10-12. Mr. Strike. Topic for 1972-73: Liberalism. Studies of ideologies and educational policies.

Ed. 672 Seminar in Educational Classics. Spring term. Credit three hours. Admission by consent. T 10:10-12.

Ed. 673 Seminar on John Dewey. Fall term. Credit three hours. Consent of the instructor required. T 12:20-2:20. Mr. Gowin. Primary aim is a critical understanding and appraisal of Dewey's philosophy, especially as it centers upon education.

Ed. 674 Seminar in History of Education. Spring term. Credit three hours. Admission by consent. M 4-6. Mr. Stutz.

Ed. 699 Conceptual Problems in Educational Inquiry. Fall term. Credit three hours. Prerequisite: 599 or equivalent, or permission of instructor. Primarily for doctoral candidates in their second year of residence. W 2:30-4:30. Messrs. Gowin and Strike.

(See p. 23 for description.)

Home Economics Education

Irving Lazar, chairman; S. Morton Altman, Donald J. Barr, Robert J. Babcock, Sara E. Blackwell, Herbert A. Brenden, Alice Davey, Irene I. Imbler, Marian E. Minot, Helen Y. Nelson, Lucinda A. Noble, Kathleen Rhodes, Andrew A. Sorensen, Joan Wright.

CSE 500 Special Problems for Graduate Students. Fall and spring terms. Credit and hours to be arranged. S/U grades optional. For students recommended by their chairmen and approved by the instructor in charge for independent, advanced work. Department faculty.

CSE 571-572 The Teacher Educator in Home Economics.

For graduate students preparing for teacher education positions involving supervision of student teachers. Permission of the instructors is required. Previous experience in teaching home economics at the secondary level is required for CSE 572.

CSE 579 The Teaching of Home Management in College. Spring term. Credit one to three hours. Permission of the instructor required. Miss Davey.

An examination of the ways home management concepts are currently being taught and the exploration of new approaches.

CSE 584 Curriculum Development. Spring term. Credit three hours. For students with professional experience in some aspect of teaching or by permission of the instructor. Miss Rhodes.

An examination of the social, psychological, and philosophical bases of curriculum theory with special attention to techniques presently used in curriculum development. Opportunity provided for students to work on individual or group projects related to their interest and expertise.

CSE 590 Evaluation. Fall term. Credit three hours. For professionals concerned with behavioral change: extension agents, social workers, educational program directors, high school and college teachers and adminis-

trators, research workers. Students without experience in any of these professional positions are admitted by permission of the instructor. Mrs. Nelson.

Basic principles of evaluation studied in relation to specific methods of appraising progress toward objectives of behavioral change. Opportunities will be given for constructing and using evaluation instruments.

CSE 599 Master's Thesis and Research. Fall and spring terms. Credit and hours to be arranged. S/U grades optional. Registration with permission of the chairman of the student's Special Committee and the instructor. Department graduate faculty.

CSE 673 Internship and Field Work in Teacher Education. Fall term. Credit two hours. S/U grades optional. Prerequisite: CSE 571 and 572. Hours to be arranged. Miss Minot and Mrs. Nelson.

Involves supervision of student teachers and conferences as needed with college supervisor and cooperating teachers in the schools. Provision made for a follow-up visit to a first-year teacher.

CSE 690 Seminar in Evaluation. Spring term. Credit two hours. Prerequisite: CSE 590 and Education 453 or equivalents. Miss Blackwell.

Opportunity for intensive study of literature concerning selected topics in evaluation, for refinement of appraisal techniques, and for carrying out an evaluative study related to current departmental research.

CSE 699 Doctoral Thesis and Research. Fall and spring terms. Credit and hours to be arranged. S/U grades optional. Registration with permission of the chairman of the student's Special Committee and instructor. Department graduate faculty. See also courses listed under Community Service Education.

Science and Environmental Education

Joseph D. Novak, chairman;
Walter F. Brautigan, Richard B. Fischer,
Verne N. Rockcastle.

Ed. 401 Our Physical Environment. Fall or spring term. Credit three hours. Open by permission only to juniors, seniors, and graduate students primarily interested in public school teaching. Limited to 18 students. Lecture, T 1:25; practical exercises T 2:30–4:25 and one hour to be arranged. Mr. Rockcastle.

A study of the commonplace phenomena and substances in our physical environment, and their use in demonstrating basic scientific principles. Frequent field trips and firsthand examination will be used in studying air,

water, soil, light, and sound, as well as some elementary mechanical and electrical devices. Emphasis will be placed on the physical environment as an aid to teaching the physical sciences in the public secondary schools.

[Ed. 402 Literature in Conservation and Environmental Education. Spring term. Credit two hours. Open only to students above sophomore rank. T Th 11:15. Mr. Fischer. Not given in 1972–73.

An examination of books, periodicals, and reports dealing with historical and present aspects of environmental quality and education. Students are involved in planning and offering the lectures, discussions, and literature reports.]

[Ed. 403 Environmental and Natural History Writing. Fall term. Credit two hours. Open to students above sophomore rank. T Th 11:15. Mr. Fischer. Not given in 1972–73.

For persons who wish to improve their ability to reach and influence others by publishing in magazines and newspapers. The class produces a weekly column for a local newspaper, in addition to other types of articles. Subject matter, outlets for articles, news releases, posters, newsletters, and brochures are discussed. A working knowledge of biology and ecology is assumed.]

Ed. 404–405 Field Natural History. Fall or spring term. Credit three hours. May be taken either term or both terms. Limited to 40 students. Lecture, M 10:10. Weekly field trips and lecture, T or Th 1:30–4:30. Mr. Fischer.

A methods and materials course devoted to studies of Northeastern plants and animals, their biology, ecology, and their use in the environmental education programs of interpretive centers, schools, and field biology courses. Man's impact on plant and animal communities is stressed.

Ed. 407 The Teaching of Elementary School Science. Fall and spring terms. Credit three hours. Registration by permission. Limited to 18 students. Lecture, W 1:25; practical exercises, W 2:30–4:25 and one other period to be arranged. Mr. Rockcastle.

The content and methods of elementary-school science with field work and laboratory emphasis on modern and experimental curricula. Includes class observation and experimentation. Designed particularly for those who are preparing to teach or supervise elementary school science.

Ed. 408 Methods of Teaching Science in Secondary Schools. Fall or spring term. Credit three hours. Prerequisite: 411 or the equivalent, or concurrent registration. For juniors, seniors, and graduate students without teaching experience. Open to students in science education intending to register for 409; permission of instructor required for all

others. Limited to 20 students per section. Fall term M W F 8 and hours for observation to be arranged; spring term M W F 8. Mr. Brautigan.

Consideration of current methodology, newly developed curricula, and materials for teaching science in secondary schools. Attention is given to the aims and goals of science instruction in relation to classroom techniques. Systematic observations in local schools. Use of video tapes, and extensive work with individualized instruction.

Ed. 409 Practice in Teaching Science in Secondary Schools. Fall or spring term. Credit six or twelve hours. Prerequisite: 408 and permission of the instructor. For seniors and graduate students. Hours to be arranged. Mr. Brautigan and staff.

Supervised practice in teaching science in secondary schools, with frequent conferences. Special seminars scheduled in conjunction with practice teaching. Multimedia forms of feedback information concerning the classroom performance will be provided to the practice teacher.

Ed. 507 The Teaching of Science. Fall term. Credit three hours. For graduate students interested in elementary, secondary, or college science teaching. Limited to 20 students. M 1:25-4:25. Mr. Novak.

A consideration of learning theory as applied to problems of selection and organization of subject matter, methods of teaching, and instructional innovation. Study of published research relevant to the improvement of science teaching. Course is conducted in a seminar style.

Ed. 509 Development of Curriculum in Science. Spring term. Credit three hours. For graduate students interested in elementary, secondary, or college science teaching. Limited to 20 students. M 1:25-4:25. Mr. Novak. Study of new science curriculum programs, including philosophy and rationale of the programs, observation of classes using new materials, concentrated study of science curriculum development in the area of individual student's interest. Course is conducted in a seminar style.

Ed. 606 Science Education Seminar. Fall or spring term. Credit one hour. S/U grades exclusively. For all graduate students who major or minor in this division. M 4:30-6. Messrs. Brautigan, Fischer, Novak, and Rockcastle.

General

Ed. 499 Informal Study in Education. Maximum credit, three hours each term. S/U grades optional. Members of the staff.

This privilege is granted to a qualified junior, senior, or graduate student when approved by an adviser from the Education staff who is personally responsible for the study. Two purposes are sanctioned: (1) to engage in a study of a problem or topic not covered in a regular course; or (2) to undertake tutorial or honors study of an independent nature in the area of the student's research interests. The program is not designed for study supplementary to a regular course for the purpose of increasing the content and credit allocation of the course.

Ed. 500 Special Studies. Credit as arranged. S/U grades optional. Limited to graduate students working on theses or other research projects. Each registration must be approved by a staff member who will assume responsibility for the work. Members of the staff.

Ed. 594 College Teaching. Spring term. Without credit. Members of the University staff. Designed for those who plan to teach in colleges and universities. Concepts and methods of teaching, organization of subject matter, motivation, learning, testing, grading, and similar problems are treated.

Ed. 598 Education as a Field for Inquiry. Fall term. Credit three hours. M W 2:30-4. (See p. 25 for description.)

Ed. 599 Methods of Educational Inquiry. Fall term. Credit three hours. Prerequisite: one course in statistics or 452 elected concurrently. T Th 2:30-4. Mr. Millman and staff. (See p. 22 for description.)

Ed. 600 Internship in Education. Fall and spring terms. Credit two to six hours as arranged. Members of the faculty. Opportunity for apprentice or similar practical experience on the graduate level in educational administration, agricultural education, guidance, personnel administration, supervision, and other types of professional service in education.

Ed. 616 Seminar in Educational Research. Fall term. Credit three hours. Prerequisite: 453 and 599 or permission of the instructor. Time to be arranged. Mr. Millman. Topic to be announced.

Ed. 698 Practicum in Educational Research. Fall and spring terms. Three to six hours credit per term. Mr. Millman and other members of the staff. (See p. 23 for description.)

Faculty and Administration

University Administration

Dale R. Corson, President of the University
Robert A. Plane, University Provost
W. Donald Cooke, Vice President for Research
Lewis H. Durland, University Treasurer
William D. Gurowitz, Vice President for Campus Affairs
W. Keith Kennedy, Vice Provost
Samuel A. Lawrence, Vice President for Administration
E. Hugh Luckey, Vice President for Medical Affairs
Thomas W. Mackesey, Vice President for Planning
Paul L. McKeegan, Director of the Budget
Arthur H. Peterson, University Controller
Richard M. Ramin, Vice President for Public Affairs
Robert F. Risley, Vice Provost
Neal R. Stamp, Secretary of the Corporation and University Counsel

Faculty of the Field of Education

(As of December 1, 1971.)

Barry B. Adams, Assistant Professor of English. Ph.D., University of North Carolina
S. Morton Altman, Assistant Professor, Community Service Education. M.S.W., Columbia University
Howard G. Andrus, Director, Educational-Vocational Guidance Office; Professor of Guidance and Personnel Administration. Ph.D., Cornell University
Robert Babcock, Associate Professor, Community Service Education. Ed.D., Cornell University
Joe P. Bail, Professor and Instructional

Materials Specialist in Agricultural Education. Ph.D., Michigan State University
Donald J. Barr, Associate Professor, Community Service Education, College of Human Ecology. Ph.D., Indiana University
Arthur L. Berkey, Assistant Professor of Agricultural Education. Ph.D., Michigan State University
Sara E. Blackwell, Professor of Community Service Education. Ph.D., University of Minnesota
Walter F. Brautigan, Assistant Professor of Science Education. M.S., Cornell University
Herbert Brenden, Assistant Professor, Community Service Education. Ph.D., Indiana University
W. Lambert Brittain, Professor of Human Development and Family Studies. Ed.D., Pennsylvania State University
George J. Broadwell, Assistant Professor in Cooperative Extension and Associate Director; Assistant Professor of Extension Education. Ph.D., Cornell University
Robert L. Bruce, Professor of Extension Education. Ph.D., Cornell University
Harold R. Cushman, Professor of Agricultural Education. Ph.D., Cornell University
Richard B. Darlington, Associate Professor of Psychology. Ed.D., University of Minnesota
Alice Davey, Associate Professor, Community Service Education. M.S., Cornell University
Robert E. Doherty, Professor of Industrial and Labor Relations and Professor of Education. Ed.D., Columbia University
William E. Drake, Professor of Agricultural Education. Ph.D., Michigan State University
Arthur E. Durfee, Professor in Extension Service, Associate Director of Extension and Professor of Extension Education. Ph.D., University of Chicago

Joan R. Egner, Associate Professor of Educational Administration. Ed.D., Cornell University

Jean Failing, Professor of Human Ecology, Associate Dean for Undergraduate Instruction. Ph.D., Ohio State University

Richard B. Fischer, Professor of Nature and Science Education. Ph.D., Cornell University

Felician F. Foltman, Professor of Industrial and Labor Relations. Ph.D., Cornell University

Harrison A. Geiselmann, Professor of Mathematics Education. Ph.D., Cornell University

Marvin D. Glock, Professor of Educational Psychology. Ph.D., University of Iowa

D. Bob Gowin, Professor of Educational Foundations. Ph.D., Yale University

Emil J. Haller, Associate Professor of Educational Administration. Ph.D., University of Chicago

John S. Harding, Professor of Human Development and Family Studies. Ph.D., Harvard University

Dalva E. Hedlund, Assistant Professor of Occupational Psychology and Guidance. Ph.D., Colorado State University

Lawrence B. Hixon, Professor of Education and Coordinator, Educational Placement. Ed.D., Syracuse University

Irene I. Imbler, Assistant Professor, Community Service Education. Ph.D., Indiana University

J. Paul Leagans, Professor of Extension Education. Ph.D., University of Chicago

Harry Levin, Chairman, Department of Psychology; Kenan Professor of Psychology. Ph.D., University of Michigan

James B. Maas, Associate Professor of Psychology and Director, Center for Improvement of Undergraduate Education. Ph.D., Cornell University

George W. McConkie, Associate Professor of Psychology and Educational Psychology. Ph.D., Stanford University

Jason Millman, Professor of Educational Research Methodology. Ph.D., University of Michigan

Marion Minot, Assistant Professor of Community Service Education. Ph.D., Cornell University

Helen Y. Nelson, Professor of Community Service Education. Ph.D., University of Minnesota

Benjamin Nichols, Professor of Electrical Engineering. Ph.D., University of Alaska

Lucinda Noble, Associate Professor of Cooperative-Extension. Ph.D., University of North Carolina at Greensboro

Joseph D. Novak, Professor of Science Education. Ph.D., University of Minnesota

Walter J. Pauk, Professor of Education and Director of Reading-Study Center. Ph.D., Cornell University

Kathleen Rhodes, Acting Chairman, Department of Community Service Education; Professor of Community Service Education. Ph.D., Cornell University

Richard E. Ripple, Professor of Educational Psychology. Ph.D., University of Wisconsin

Verne N. Rockcastle, Professor of Nature and Science Education. Ph.D., Cornell University

Andrew A. Sorensen, Assistant Professor, Community Service Education. Ph.D., Yale University

Frederick H. Stutz, Professor of History of Education. Ph.D., Cornell University

Kenneth A. Strike, Assistant Professor, Philosophy of Education. Ph.D., North Western University

Frederick K. T. Tom, Field Representative for Education; Professor of Agricultural Education. Ph.D., Cornell University

Helen L. Wardeberg, Chairman, Department of Education; Professor of Education. Ph.D., University of Minnesota

Lyle L. Wicks, Instructional Materials Specialist in Agricultural Education. M.S., Cornell University

John Wilcox, Professor of Education and Director, Cornell Institute for Career Education. Ed.D., Cornell University

Joan Wright, Assistant Professor, Community Service Education. Ph.D., Cornell University

Faculty of the M.A.T. Program

Barry B. Adams

Joe P. Bail

LeRoy Benoit, Professor of Linguistics. Ph.D., Harvard University

Jacques Bereaud, Associate Professor of Romance Studies. Ph.D., University of Lille, France

Arthur L. Berkey

Sara E. Blackwell

Dalai Brenes, Professor of Romance Studies. Ph.D., Cornell University

W. Lambert Brittain

Harold R. Cushman

William E. Drake

Richard B. Fischer

Harrison A. Geiselmann

Paul Gottschalk, Assistant Professor of English. Ph.D., University of Chicago

Walter LaFeber, Professor of History. Ph.D., University of Wisconsin

Marion Minot

Helen Y. Nelson

Joseph D. Novak

Walter Pintner, Associate Professor of Russian History. Ph.D., Harvard University

Kathleen Rhodes

Frederick K. T. Tom

Emeritus Professors

Flora M. Thurston Allen, Professor of Home Economics Education. M.A., Columbia University

Lynn A. Emerson, Professor of Industrial Education. Ph.D., New York University

Edwin R. Hoskins, Professor of Education (Agricultural Education). Ph.D., Cornell University

Margaret Hutchins, Professor of Home Economics Education. Ph.D., Cornell University

Philip G. Johnson, Professor of Science Education. Ph.D., Cornell University

Paul J. Kruse, Professor of Education

(Educational Psychology). Ph.D., Columbia University

Clyde B. Moore, Professor of Education. Ph.D., Columbia University

A. Gordon Nelson, Professor of Counseling Psychology. Ph.D., New York University

H. Irene Patterson, Professor of Home Economics Education. M.S., University of Minnesota

Isabel J. Peard, Professor of Education. Ph.D., Cornell University

William A. Smith, Professor of Education. Ph.D., Cornell University

Ethel Waring, Professor of Child Development and Family Relations. Ph.D., Columbia University

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College of Architecture, Art, and Planning
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Department of Asian Studies
Field of Education
College of Engineering
School of Hotel Administration
New York State College of Human
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Labor Relations
Officer Education (ROTC)
Summer Session

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Graduate School: Course Descriptions
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New York State Veterinary College
Graduate School of Business and Public
Administration
Graduate School of Nutrition
Medical College (New York City)
Cornell University—New York Hospital
School of Nursing (New York City)
Graduate School of Medical Sciences
(New York City)

Requests for the publications listed above may be addressed to

CORNELL UNIVERSITY
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Edmund Ezra Day Hall
Ithaca, New York 14850

(The writer should include his zip code.)