

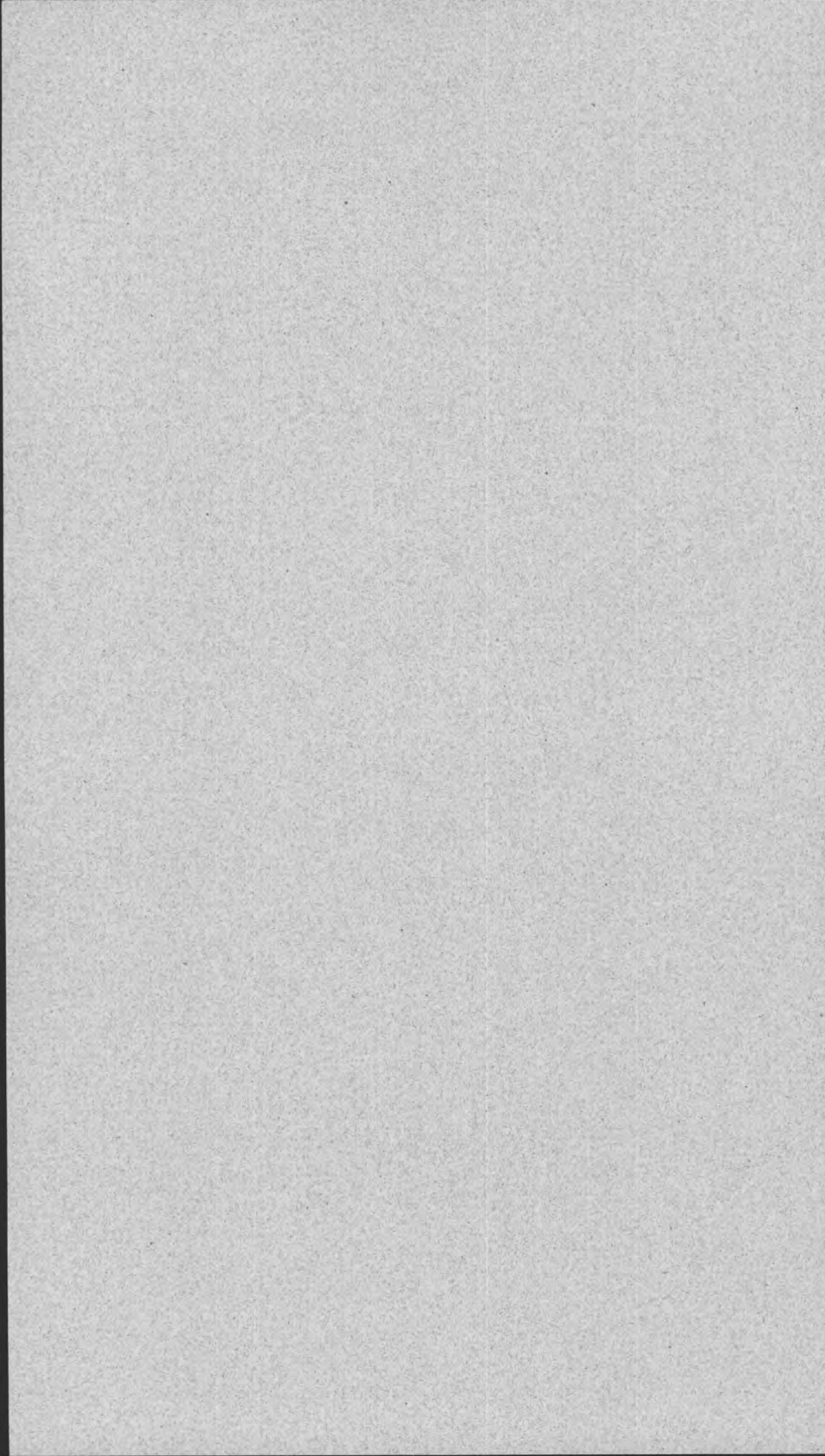


Cornell
University

ANNOUNCEMENTS

Education

1970-71



Cornell University

Education

1970-71

Cornell Academic Calendar

1969-70*

Registration, new students	Th, Sept. 11
Registration, old students	F, Sept. 12
Fall term instruction begins, 7:30 A.M.	M, Sept. 15
Midterm grade reports due	S, Oct. 25
Thanksgiving recess:	
Instruction suspended, 1:10 P.M.	W, Nov. 26
Instruction resumed, 7:30 A.M.	M, Dec. 1
Fall term instruction ends, 1:10 P.M.	S, Dec. 20
Christmas recess	
Independent study period begins	M, Jan. 5
Final examinations begin	M, Jan. 12
Final examinations end	T, Jan. 20
Intersession begins	W, Jan. 21
Registration, new students	Th, Jan. 29
Registration, old students	F, Jan. 30
Spring term instruction begins, 7:30 A.M.	M, Feb. 2
Deadline: changed or make-up grades	M, Feb. 9
Midterm grade reports due	S, Mar. 14
Spring recess:	
Instruction suspended, 1:10 P.M.	S, Mar. 28
Instruction resumed, 7:30 A.M.	M, Apr. 6
Spring term instruction ends, 1:10 P.M.	S, May 16
Independent study period begins	M, May 18
Final examinations begin	M, May 25
Final examinations end	T, June 2
Commencement Day	M, June 8
Deadline: changed or make-up grades	M, June 15

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

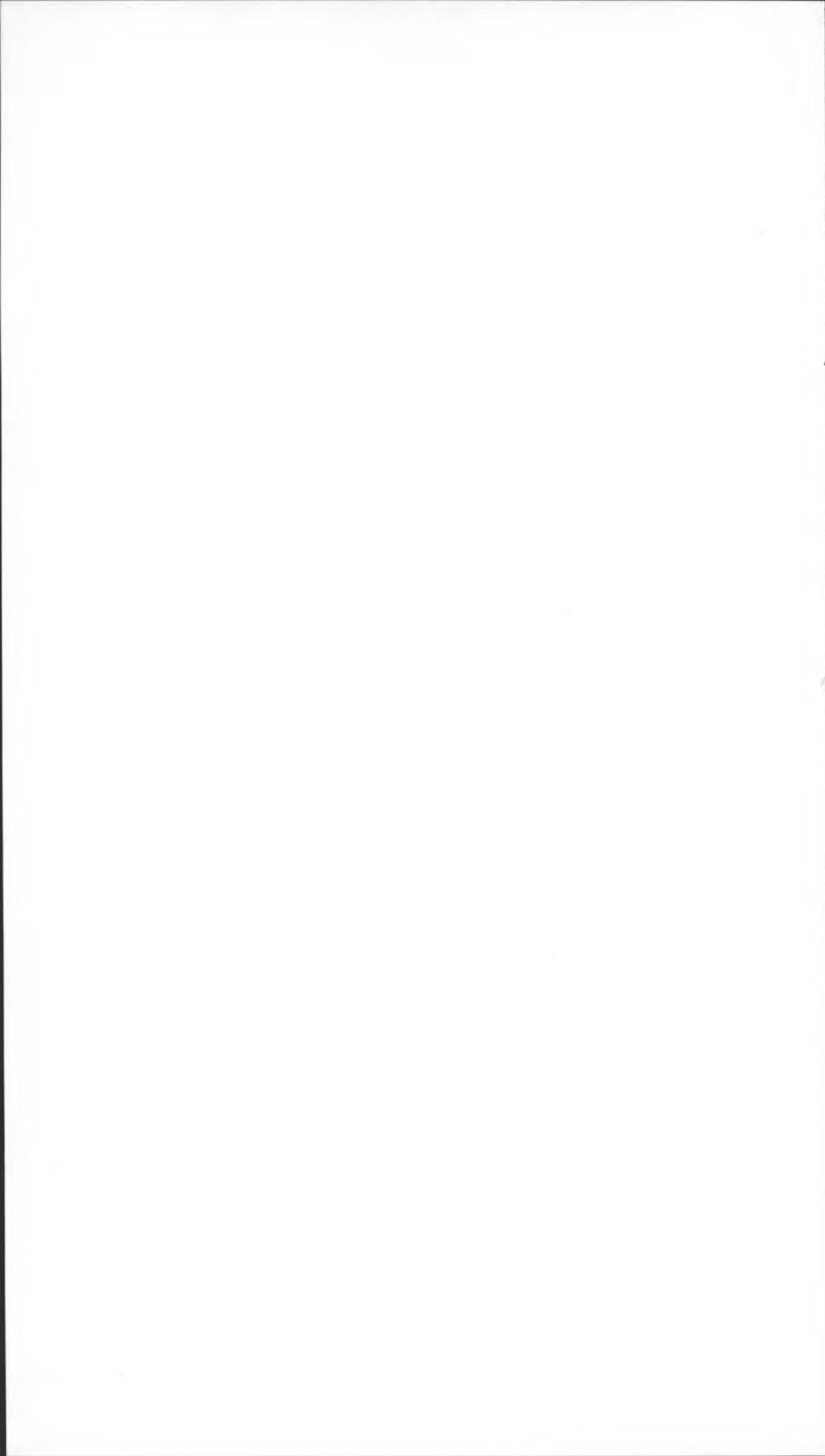
CORNELL UNIVERSITY ANNOUNCEMENTS

Volume 61, Number 16, December 18, 1969. Published twenty-three times a year: five times in October; four times in August; three times in March; twice in May, July, September, and November; and once in January, June, and December. Published by Cornell University at Sheldon Court, 420 College Avenue, Ithaca, New York 14850. Second-class postage paid at Ithaca, New York.

Contents

2	ACADEMIC CALENDAR
5	EDUCATION AT CORNELL
6	GRADUATE PROGRAMS
6	Agricultural Education
6	Curriculum and Instruction
7	Development of Human Resources
7	Educational Administration
8	Educational Psychology and Measurement
9	Extension and Continuing Education
10	Guidance and Personnel Administration
11	History, Philosophy, and Sociology of Education
11	Home Economics Education
12	Science and Nature Education
13	PRE-SERVICE PROGRAMS
14	GRADUATE STUDY
14	Admission
15	General Degrees
15	Professional Degrees
16	Master of Arts in Teaching
16	Doctor of Education
18	GRADUATE ASSISTANTSHIPS AND FINANCIAL AID
20	EDUCATIONAL PLACEMENT
20	SUMMER SESSION AND EXTRAMURAL DIVISION
21	COURSES OF INSTRUCTION
21	Agricultural Education
23	Curriculum and Instruction
25	Development of Human Resources
26	Educational Administration
27	Educational Psychology and Measurement
29	Extension and Continuing Education
31	Guidance and Personnel Administration
32	History, Philosophy, and Sociology of Education
34	Home Economics Education
34	Science and Nature Education
36	General
38	FACULTY
41	INDEX
43	LIST OF ANNOUNCEMENTS

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



Cornell University

EDUCATION AT CORNELL

Education at Cornell is organized to facilitate research, teaching, and service. Several administrative units emphasize the University-wide concern for scholarly study 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 the Department of Community Service Education in the New York State College of Human Ecology.

The Field is concerned with both the scholarly study of educational topics and the advancement of Education as a profession. 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. Each student plans his program with the advice of a Special Committee selected by him.

Graduate students working in general or professional degree programs are encouraged to avail themselves of the curricular and scholarly resources of the University. Degree candidates are expected to develop competence in educational research and to associate with the faculty in continuing research projects.

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

Students with strong backgrounds in liberal education and a thoughtful commitment to education will find opportunities to work closely with faculty members in individualized programs featuring courses, seminars, independent study, and practical experiences.

GRADUATE PROGRAMS

AGRICULTURAL EDUCATION

The graduate program in agricultural education prepares the student 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 in agricultural education and as administrators in vocational education. Graduates may also follow careers in state and federal education agencies or in overseas educational programs. Candidates may study for the Master's degree or for the Ed.D. or Ph.D. degree.

Students may concentrate on aspects of agricultural education such as administration, curriculum, research, supervision, or teacher education. At the Master's level, prior experience as a teacher of agriculture 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 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 country-wide expansion in programs of vocational education afford many good career opportunities for specialists in agricultural education. Cornell graduates of this program hold positions in all the career fields previously described.

For further information, apply to: Chairman, Division of Agricultural Education, Stone Hall.

CURRICULUM AND INSTRUCTION

The graduate program in curriculum and instruction is devoted to study of the total curriculum and its relation to instruction at any level. 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 (e.g., department head, curriculum coordinator, academic subject supervisor, director of elementary, secondary or occupational education) 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 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 an elementary or secondary teacher may be completed concurrently. (The Master of Arts in Teaching degree is available for liberal arts graduates seeking certification to teach in public schools. For information, inquire at the University Office of Teacher Preparation or the Department of Education, 100 Stone Hall.)

Students who have experience in general elementary or academic secondary fields will find this the most suitable major area for advanced study. Those who have specialized in agricultural education, science and nature education, or home economics education but who desire a broader-based context for doctoral study, may choose the curriculum and instruction major or minor with the advice of faculty in these areas.

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

DEVELOPMENT OF HUMAN RESOURCES

The School of Industrial and Labor Relations offers opportunities for work toward the Doctor of Education degree. Candidates for this degree take their major work in development of human resources, a subarea of study in organizational behavior.

Information about this program may be found in the *Announcement of the New York State School of Industrial and Labor Relations*.

EDUCATIONAL ADMINISTRATION

Graduate students in this subject are offered a broad, varied curriculum in the social sciences that relate to educational administration. Each student will work 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. Success-

ful completion of a prescribed program insures certification in New York State if experience requirements are also met.

For further information, apply to: 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 their 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 processing, 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 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 of simple verbal materials.

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 in other units of the University.

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

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

EXTENSION AND CONTINUING EDUCATION

Cornell University has a graduate program in extension and continuing education leading to both the Master's degree and the doctorate.

The program is designed to prepare administrators, supervisors, trainers, and other specialists for leadership positions in extension and continuing education and community development 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, and physical environments. Major focus is on helping students understand the nature and role of the continuing education process and how to utilize it, both in this country and abroad, as the activating force in planned programs of economic and social change.

The curriculum is interdisciplinary in character and takes advantage of flexibility permitted by the Graduate School in formulating student programs. Individual study plans are developed through personal counseling. The theory, technology, principles, and methodology central to the extension education process are covered in divisional graduate courses and seminars. Concepts gained from these studies form a nucleus around which students integrate study in a number of supporting disciplines that add to their understanding of problems encountered in programs of planned change.

Among faculty and student research interests are the structure of extension, adult and community development organizations; the design of programs, communication processes; and evaluation of programs, staffing, and training.

Graduates of this division typically accept or return to positions of leadership in adult education agencies or the Cooperative Extension Service in the United States or in national or international development agencies in other countries. Other candidates prepare for general university extension, church or missionary work, or other fields involving the development and execution of continuing education programs.

In addition to meeting standards of the Graduate School, applicants usually must have successful experience in extension or closely related work; 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: Chairman, Division of Extension and Continuing Education, Stone Hall.

GUIDANCE AND STUDENT PERSONNEL ADMINISTRATION

Programs in this subject area, leading to a Master's or a 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. In addition to providing for rigorous academic study, the program includes practicum experience. Each applicant should possess a strong undergraduate academic background and a professional commitment to college student personnel work.

A program of professional preparation, approved by the New York State Education Department, is available for men and women who wish to become school counselors. The graduate courses required for both provisional and permanent certification are offered during the academic year and in the summer. Students who are admitted to the Graduate School may meet certification and Master's degree requirements concurrently.

In most states, two years of teaching experience are prerequisite for certification in guidance. Students who wish to become certificated to serve as counselors in public schools should have met at least part of the experience requirement before they begin a program of preparation for counseling.

Men and women who complete the program and meet all other certification requirements are qualified to accept positions as junior and senior high school counselors, directors of guidance, teacher-counselors, coordinators of pupil personnel services, and shared counselors in districts having boards of cooperative educational services. Some of our graduates, after working as counselors for several years, have returned to Cornell to pursue a doctoral program in guidance and personnel administration.

A student who wishes to embark upon a program leading to the doctorate will be helped to plan a sequence of courses that are appropriate for him, taking into consideration degree requirements, the student's previous preparation, and his vocational objective. In addition to work in guidance and personnel administration, he will have a minor in some branch of psychology, and a second minor selected in consultation with the chairman of his Special Committee who will represent the major.

Inquiries concerning all programs should be addressed to: Chairman, Programs in Guidance and Personnel Administration, Stone Hall.

HISTORY, PHILOSOPHY, AND SOCIOLOGY OF EDUCATION

All doctoral students will be expected to have or develop an acquaintance with the following three areas in this field and to choose one for an area of specialization: history of education, philosophy of education and educational sociology.

Ordinarily about half of a candidate's program will include study in one or more of the following disciplines: history, philosophy, sociology, government, and economics. One minor for the doctorate must be outside the Field of Education.

Areas of faculty and student study and research include structure of subject matter, analysis of educational concepts, fundamental assumptions in educational research, history of American education, critical thinking, relation of philosophy and education, rhetoric, logic in teaching, nature of theory in education, and educational aims.

Doctoral graduates from this division typically accept appointments as college and university professors, although a few begin work directly in educational research for public agencies or businesses. For those preparing for college teaching, a practical experience is provided, including teaching, student evaluation, and course syllabus development. For those preparing primarily for a research position, relevant research experience is also provided.

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

HOME ECONOMICS EDUCATION

Home economics education is an appropriate major for graduate students who wish to prepare for teaching, research, or administrative positions in colleges and universities; for secondary school teaching or supervision; or for work in Cooperative Extension and other types of informal educational programs. The demand for home economists to fill such positions throughout the United States far exceeds the supply each year. There is also a growing demand for qualified home economics educators for new positions developing at the state and national level as a result of recent social legislation, as well as for international positions.

It is expected that graduate majors in home economics education will have background in home economics and the related sciences and in education. Students without such background must be prepared to acquire it prior to or during the period of degree candidacy.

In consultation with the Special Committee, each student is encouraged to plan a program of courses and seminars selected from the various schools and colleges of the University and related to the student's particular concerns. Graduate courses in home economics education deal with the general areas of curriculum, teaching methods, and

evaluation, and with the specialized areas of administration and supervision, adult education, higher education, and teacher education.

Students may acquire a variety of teaching and research experiences through course and seminar assignments, independent study, and assistantships. Emphasis is placed on the development of teaching and evaluation materials which reflect current thought regarding home economics curriculum and human learning. Current research projects are related to home economics teacher education and supervision, secondary education in home economics (particularly its evaluation), characteristics of adolescents which have implications for vocational education, and international home economics. Student theses may contribute directly to these projects or may be independent of them.

This program is offered by the faculty of the Department of Community Service Education, New York State College of Human Ecology (formerly College of Home Economics). For further information, write to: Department Chairman, Martha Van Rensselaer Hall.

SCIENCE AND NATURE EDUCATION

Undergraduate and graduate programs in this area prepare 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. 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. Normally such a program will require further science courses and advanced education courses designed to strengthen teaching effectiveness. The candidate is advised to have some elementary or secondary school experience or the equivalent before beginning a graduate teaching degree program.

Experienced teachers who are interested in the improvement of classroom teaching at precollege levels find special opportunities in supervision and teacher preparation. The work may be at local, state, or national levels in public or private education. Many other nations of the world seek such services, too. The work usually requires special studies of new curricula, methods of teaching, guidance and evaluation, and supervision and administration, together with studies in the sciences and humanities.

Cornell's distinguished history in nature and conservation education is reflected in the large number of its graduates who are now leaders in scientific nature study, conservation education, and natural history writing. A growing awareness of our natural resources together with an increasing need to enjoy them while using them wisely, has contributed to a steady increase of job opportunities in these fields.

Teachers and others with strong interests in nature and conservation 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 for college teaching.

Research projects under way in the division are concerned with natural history, conservation of natural resources, nature interpretation, history of science education, science curriculum developments, and evaluation of science instruction. Graduate students have opportunities to develop research studies that help to clarify problems related to their future careers.

In the past few years, substantial increases in funds for support of research in teaching-learning have been obtained. It is likely that thousands of education research workers will be needed in the last quarter of this century by both public and private education organizations. The Division of Science 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: Chairman, Division of Science Education, Stone Hall.

PRE-SERVICE PROGRAMS

Programs designed to prepare teachers for public school teaching are coordinated by the University Office of Teacher Preparation.

Completion of a Cornell program qualifies a student for a teaching certificate in New York State.

The Master of Arts in Teaching (M.A.T.) degree is designed for those planning to undertake professional preparation in the fifth year. Students enrolled in the various undergraduate colleges at Cornell will find that early consultation with appropriate advisers will facilitate a sequentially planned five-year program. For admission to the fifth-year program, application to the Graduate School is necessary.

Four-year programs leading to provisional certification may be completed by undergraduates majoring in and preparing to teach in *some secondary school fields*. Students meet graduation requirements of the college in which they are registered and follow a recommended curriculum in teacher preparation.

Further information about courses and sequences may be obtained at the University Office of Teacher Preparation, or from the Department of Education, 100 Stone Hall.

GRADUATE STUDY

Admission to study in the Graduate School is granted to graduates of approved colleges whose experience and academic backgrounds provide evidence of ability to succeed in study and practice of the various professions for which preparation is provided within the School. Members of the faculty make recommendations to the Graduate School relative to every student seeking admission. Final admission decisions rest with the dean of the Graduate School.

An applicant for admission may become a candidate for a general degree (M.A., M.S., or Ph.D.) administered by the Graduate School, or for a professional degree (M.A.T. or Ed.D.) administered by the Field of Education.

STATUS OF ADMISSION. Every applicant is either (1) admitted, or (2) provisionally admitted to pursue a program for an advanced degree, or (3) admitted as a nondegree candidate.

Each graduate student in a degree program in any status will work under the supervision of a committee of the graduate faculty. The committee is chosen by the student to give representation for his total program of study. Each noncandidate will have an adviser.

APPLICATION. An application for admission should be made on a form supplied by the Graduate School. No application will be acted upon until all the required credentials have been filed. For admission in the fall term the application should be filed before March 1; for admission in the Summer Session, between March 15 and May 1. Though an application may be filed at any time, the field cannot give assurance that it will receive the same consideration that it would have if filed during the periods listed above.

All applicants, including graduates of Cornell University, must submit complete official transcripts of all previous college courses. All applicants for advanced degrees with majors in education (M.A., M.S., M.A.T., Ed.D., Ph.D.) residing in the United States or Canada, whose native language is English, are required to submit with their application either a score from the Graduate Record Examination Aptitude Test or the scores of both the Miller Analogies Test and the Doppelt Mathematical Reasoning Test.

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. Most of the regulations are contained in the *Code of Legislation of the Graduate Faculty, Cornell University*. These are supplemented in this *Announcement*.

RESIDENCE. Each candidate for an advanced degree is expected to complete his residence with reasonable continuity. Under any circumstances, a candidate who fails to register during any period of four or more years may continue only after the General Committee of the Graduate School has stipulated the amount of additional residence to be required. The Committee will be guided in its decision by an esti-

mate, approved by the candidate's Special Committee, of the period of study necessary to recover lost ground. A candidate must complete all requirements for an M.A. or M.S. degree within four years, and for a Ph.D. degree within seven years of the time of first registration in the Graduate School.

Residence credit earned during candidacy for professional Master's degrees at Cornell or elsewhere may be transferred toward meeting the residence requirements for a doctoral degree in an amount not exceeding two units. The amount transferable is dependent upon an evaluation of the candidate's program and the manner in which the residence was earned.

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

GENERAL DEGREES

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 Education	Guidance and Personnel
Curriculum and Instruction	Administration
Development of Human Resources	History, Philosophy, and Sociology
Educational Administration	of Education
Educational Psychology and	Home Economics Education
Measurement	Science and Nature Education
Extension and Continuing	
Education	

Candidates for advanced degrees in Education are expected to include preparation in fields which supplement the field of professional education.

The language requirement for the degree of Ph.D. is left to the discretion of the candidate's Special Committee; none is required for the M.A. or M.S. degree.

Students must register both in the Graduate School and with the registrar of the University at the beginning of each term or session. Requirements for these degrees are contained in the *Announcement of the Graduate School: Social Sciences* and in the *Code of Legislation of the Graduate Faculty*.

PROFESSIONAL DEGREES IN EDUCATION

Advanced professional degrees in Education are designed as preparation for the professions in Education. The admissions processes, requirements, and curricula for such degrees, as approved by the Graduate Faculty, are announced and administered by the Faculty of Education, acting as a Field of the Graduate School. Two professional degrees, Master of Arts in Teaching and Doctor of Education, are awarded.

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

The program for this degree is designed for and limited to those preparing for teaching in elementary and secondary schools.

ADMISSION. Applicants must have considerable depth of preparation in their intended teaching field and give evidence of ability necessary for successful progress in graduate study. They also 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 through registration in:

1. Regular academic year terms.
2. Summer Session.
3. Extramural Division.

Full-time study is required in all but exceptional cases.

SPECIAL COMMITTEE. A candidate will select a Special Committee of two or more members of the Graduate Faculty, one of whom will represent the Field of Education and serve as chairman. The chairman normally will belong to one of the teacher preparation specializations. Other members of the Committee are to be selected with the advice of the chairman to give adequate representation of the candidate's program. For a candidate preparing for secondary school teaching, the teaching field will be represented.

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.

The Degree of Doctor of Education (Ed.D.)

Programs for this degree are designed to prepare the candidate for positions of leadership in the educational profession such as administrator, curriculum coordinator, extension specialist, student services director, supervisor, or teacher.

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

Two residence units are the maximum number which may be earned through extramural registration, in summer sessions at Cornell, or in similar manner at other centers of graduate study.

In addition to meeting residence requirements, a candidate must complete successfully one year of participation in Directed Field Experience as described in subsequent statements.

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, designed to develop competence in a field of professional service and in the general field of professional education, 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.

The program must include 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.

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 period of participation, known as Directed Field Experience, will follow completion of a minimum of two units 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 for experience must be approved by the Committee, and filed with the Office of the Field Representative for Education prior to beginning the participation period. A final report, approved by the Special Committee, is prerequisite to completion of the degree program.

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 for the degree. 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.

1. The Qualifying 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 for completion of candidacy.

2. The Final Examination is given by the Special Committee; other members of the faculty may be invited to attend. The examination must be given in two parts: Examination A, which may be taken at the end of the fourth unit of residence, is on the field of professional service and studies in education and may be written or oral or both; Examination B is taken after the thesis is approved by the Special Committee.

GRADUATE ASSISTANTSHIPS, FELLOWSHIPS, SCHOLARSHIPS, AND 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: Field Representative for Education, Stone Hall, Cornell University. Completed applications must be received by March 1. 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 3,000 to 3,480, with appointments ranging from nine to twelve months. In the College of Agriculture and the College of Human Ecology tuition is waived for assistantship holders. Tuition is not waived in other assistantships.

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, Edmund Ezra 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.

Information concerning fellowships and scholarships open to candidates in *all* fields may be found in the *Announcement of the Graduate School: Social Sciences*.

TUITION AND FEES FOR GRADUATE STUDENTS

REGISTRATION DEPOSIT. An amount of \$35 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, chest x-ray, and charge for examination book, and covers certain expenses incident to graduation if the student receives a degree. The deposit will not be refunded to any candidate who withdraws his application after May 22 or within twenty days of his admission approval.

TUITION AND FEES. For detailed information on the amounts of the tuition and the General Fee in the various colleges of Cornell, see the *Announcement of the Graduate School: Social Sciences*.

The General Fee contributes toward the services supplied by the University libraries, health services, and the student union in Willard Straight Hall, and pays a portion of the extra cost of laboratory instruction 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 that degree having been previously completed, shall 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; of publishing the abstract in the bimonthly periodical, *Dissertation Abstracts*; of mailing the thesis and abstract to and from the microfilm publisher; and of binding both copies of the thesis for deposit in the University Library.

SPECIAL TUITION WAIVERS. Upon recommendation by the appropriate dean and after action by the Board of Trustees 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 member of the teaching or scientific staff 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.

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 elementary 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 educational 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 contact Mr. Edward DeAntoni, assistant director for Educational Placement, Career, Summer Plans, and Placement Center.

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

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 characteristic of 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 may register in on-campus courses through the Division of Extramural Courses, provided they are residents of the Ithaca area and are employed. Under certain circumstances, candidates for a graduate degree at Cornell may register through the Extramural Division but undergraduates may not do so. 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: Director, Division of Summer Session and Extramural Courses, B-20 Ives 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.

AGRICULTURAL EDUCATION

Mr. J. P. Bail, chairman; Messrs. A. L. Berkey, H. R. Cushman, W. E. Drake, F. 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. Drake.

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

Ed. 332. METHODS, MATERIALS, AND DIRECTED PRACTICE IN TEACHING AGRICULTURE IN THE SCONDARY SCHOOL

Fall term. Credit nine hours. Staff in agricultural education.

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 local courses of study; launching and directing supervised farming programs; planning for and teaching all-day classes; advising Future Farmers chapters; and other problems relating to development of a balanced program for vocational education in agriculture in a local area.

Ed. 433. SPECIAL PROBLEMS IN AGRICULTURAL EDUCATION

Spring term. Credit one or two hours. Graduate and undergraduate. Th 1:25. Mr. Bail and staff.

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

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 by teachers of agriculture in such phases of the out-of-school program as making arrangements to have a program, 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 AGRICULTURAL EDUCATION]

Fall term. Credit two hours. Given in alternate years. Open to students with experience in teaching agriculture, or by permission. W 2:30-4:25. Mr. Bail. Not given in 1970-71.

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

Ed. 532. ADVANCED METHODS AND MATERIALS OF TEACHING AGRICULTURE

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 in agriculture.

Ed. 533. PLANNING COURSES OF STUDY AND AGRICULTURAL EXPERIENCE PROGRAMS

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 courses of study and teaching calendar. Consideration will be given to principles, meanings, and functions of agricultural 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.

Designed for leaders in the field of agricultural education who are responsible for organizing programs. A consideration of the principles involved in organizing and conducting out-of-school programs for young and adult groups.

[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 1970-71.

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 AGRICULTURAL 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 agricultural 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 SCHOOLS

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 for everyday living.

Ed. 539. EVALUATING PROGRAMS OF AGRICULTURAL EDUCATION

Spring term. Credit two hours. Given in alternate years. Open to students with

experience in teaching agriculture or by permission. T 1:25-3:20. Mr. Drake.

Students will study objectives and evaluative criteria and develop criteria and procedures for evaluation of programs of agricultural education in the secondary schools.

Ed. 630. SEMINAR IN AGRICULTURAL EDUCATION

Spring term. Credit one hour. Th 2:30-4:25. Mr. Tom.

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.

CURRICULUM AND INSTRUCTION

Miss H. L. Wardeberg, chairman; Messrs. J. P. Bail, R. L. Bruce, W. E. Drake, H. A. Geiselmann, D. B. Gowin, Miss Anne LaBastille, Messrs. J. D. Novak and W. J. Pauk, Miss Isabel Peard, Messrs. R. E. Ripple and Mr. V. N. Rockcastle.

Ed. 332. METHODS, MATERIALS, AND DIRECTED PRACTICE IN TEACHING AGRICULTURE IN THE SECONDARY SCHOOLS

Fall term. Credit nine hours. Staff in agricultural education. (See p. 22 for description.)

Ed. 407. THE TEACHING OF ELEMENTARY SCHOOL SCIENCE

Fall term. Credit three hours. Registration by permission. Mr. Rockcastle. (See p. 35 for description.)

Ed. 408. METHODS OF TEACHING SCIENCE IN SECONDARY SCHOOLS

Fall or spring term. Credit three hours. Registration by permission. Members of the staff. (See p. 35 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. Staff. (See p. 35 for description.)

Ed. 444. TEACHING OF SECONDARY MATHEMATICS

Spring term. Credit three hours. T Th 4-5:15. Mr. Geiselmann.

Useful materials and practical methods for effective teaching of mathematics in the junior and senior high school. 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.

24 CURRICULUM AND INSTRUCTION

Ed. 471. LOGIC IN TEACHING

Spring term. Credit three hours. Mr. Ennis. (See p. 32 for description.)

Ed. 473. CONTEMPORARY PHILOSOPHY OF EDUCATION

Spring term. Credit three hours. M W 12:20-2:20. Mr. Gowin.
Topic for 1970-71: 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 twenty students. M 1:25-4:25. Mr. Novak. (See p. 36 for description.)

Ed. 532. ADVANCED METHODS AND MATERIALS OF TEACHING AGRICULTURE

Spring term. Credit two or three hours. M 2:30-4:25. Mr. Berkey. (See p. 22 for description.)

Ed. 533. PLANNING COURSES OF STUDY AND AGRICULTURAL EXPERIENCE PROGRAMS

Fall term. Credit three hours. M F 1:25-2:55. Mr. Drake. (See p. 22 for description.)

Ed. 540. THE ART OF TEACHING

Fall and spring term. Credit and hours arranged. Students may register only with consent of appropriate supervisor. Members of the staff.

For students enrolled in fifth-year teacher education programs. Students will be assigned to elementary and secondary schools for directed field experiences.

[Ed. 542. SEMINAR IN SECONDARY EDUCATION]

Fall term. Credit three hours. Limited to graduate students. Members of the staff. Not given in 1970-71.

Historical background and theoretical considerations relating to curriculum and instruction in American secondary schools.

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 1970-71.

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. Miss Wardeberg.

A problems seminar, to study current problems and research in this field.

Ed. 549. SEMINAR IN THE TEACHING OF ELEMENTARY MATHEMATICS

Fall term. Credit three hours. Registration by permission of instructor. Mr. Robert Davis.

This seminar will focus on observing one-to-one teaching in elementary school mathematics. How often can one observe the teacher-child interactions,

considering mathematical ideas as well as "content-free" behavior? How often does it occur? How often do children work independently? How effective is that, and how can you make it more effective?

Observations of children can be arranged at the East Hill School, or elsewhere.

Ed. 565. SUPERVISION OF INSTRUCTION

Spring term. Credit three hours. Miss Wardeberg.

(See p. 27 for description.)

Ed. 645. SEMINAR IN CURRICULUM THEORY AND RESEARCH

Spring term. Credit three hours. Registration by permission of the instructor.

T 1:25-3:20. Members of the staff.

DEVELOPMENT OF HUMAN RESOURCES

Messrs. R. N. Campbell, R. E. Doherty, F. F. Foltman.

ILR 323. TECHNIQUES AND THEORIES OF TRAINING IN ORGANIZATIONS

Credit three hours. Spring term.

Deals with the methods used, formally and informally, by organizations for training personnel at all levels. These methods will be compared with relevant psychological formulations of the problem of learning. The place of practice, understanding, and motivation in the acquisition of motor and other skills; the use of case and incident method; learning techniques in a group setting (discussion and role playing); learning during performance appraisals; learning as a result of identification. Various teaching methods will be practiced.

ILR 423. DESIGN AND ADMINISTRATION OF TRAINING PROGRAMS

Credit three hours. Fall term.

Study of the role and function of organizational training. Consideration will be given to the planning and philosophy of programs used by organizations to develop the skill, understanding, and attitudes of the work force.

ILR 524. PUBLIC POLICY AND DEVELOPMENT OF HUMAN RESOURCES

Fall term.

Analysis of the need for development of human resources, trends in work force requirements and implications for public policy, the role of government and of educational institutions in providing development programs, and the effectiveness of such programs. Attention to the rationale, organization, and administration of specific programs such as apprenticeship, vocational and technical schools, technical institutes, university programs for development of technical, scientific, and managerial skills, and the foreign technical assistance program. Implications and problems of public support for the development of human resources.

ILR 527. MANAGEMENT AND LEADERSHIP DEVELOPMENT

Fall term.

Study of the factors affecting the growth and development of managers and leaders in industrial and other organizations. Consideration is given to the organizational environment, formal and informal development programs, leadership theory, and individual attitudes and beliefs. Special emphasis is given to analysis of specific case studies of actual practice.

ILR 627. CURRENT ISSUES AND RESEARCH IN HUMAN RESOURCES DEVELOPMENT

Fall term.

A graduate seminar centering on selected issues and relevant research involved in the development of managerial and work force skills (particular emphasis for the seminar to be determined with the seminar group). Seminar papers and class discussions might concentrate on such topics as management development, impact of technological change on training programs, development of scientific and professional personnel, or labor union education.

ILR 570. OCCUPATIONAL COUNSELING AND CAREER GUIDANCE

The philosophy, theory, methods, and problems of counseling as related to employability, planning, employment, career guidance, learning and training and work discipline. Role of the counselor including psychological and ethical aspects counseling and developing effective relationships with individuals and agencies importantly associated with the counseling function. Utilizing sources of information with regard to jobs, occupations, and career ladders. Methods used in counseling such as structured and nondirective interviews, biological data, tests, and measurements. Problems in counseling such as developing rapport, avoiding overdependence, securing commitment, and encouraging growth, development and emotional maturity.

EDUCATIONAL ADMINISTRATION

Mrs. Joan R. Egner, chairman; Mr. E. J. Haller, Mr. L. B. Hixon, Miss H. L. Wardeberg.

Ed. 561. THEORY AND PRACTICE OF ADMINISTRATION

Fall term. Credit three hours. M W 2:30-4:00. Mr. Haller.

The course is keyed to concepts and research findings in the social and behavioral sciences that are basic to the administration of educational organizations. Institutional and individual problems are analyzed from the viewpoint of organizational dilemmas and role conflict.

Ed. 562. THE PRINCIPALSHIP

Spring term. Credit three hours. W 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 non-instructional personnel, and community relationships. Each student will elect to specialize at the elementary or secondary school level for an individually planned program of intensified study.

Ed. 563. SOCIAL CONTEXT OF EDUCATIONAL ADMINISTRATION

Spring term. Credit three hours. M W 2:30-4. Mr. Haller.

The purpose of this course is to familiarize students with environmental and organizational factors influencing contemporary education. Topics include stratification and mobility, socialization processes, social control, professionalization, bureaucratization and the teaching career. Students concerned with educational administration will consider the administrative implications of topics covered. The course will be organized as a seminar. Students will be expected to conduct and report a small-scale empirical research project.

Ed. 564. ECONOMIC ISSUES IN EDUCATION

Spring term. Credit three hours. 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 Th 11:15-12:45. 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. W 4-6. Mr. Hixon.

Review and analysis of federal and state legislation, court decisions, opinion, and regulations which affect educational institutions. Attention to New York State legislation is optional.

Ed. 569. PERSONNEL ADMINISTRATION

Fall term. Credit three hours. 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 some facility in the analysis of conceptual schemes and research projects.

Ed. 668. SEMINAR IN EDUCATIONAL ADMINISTRATION

Spring term. Credit three hours. Prerequisite, consent of instructor. Time to be arranged. Mrs. Egner and staff.

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

EDUCATIONAL PSYCHOLOGY AND MEASUREMENT

Mr. M. D. Glock, chairman; Messrs. H. G. Andrus, H. Levin, G. W. McConkie, J. Millman, A. G. Nelson, R. E. Ripple.

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 in-

terested in the educational process. Freshmen and sophomores not admitted. Limit 100. M W F 9:05. Fall term, Mr. Ripple. Spring term, Mr. Glock. Special section for agricultural education majors, time to be arranged. Mr. Glock. (Equivalent of 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, a course in general psychology. Limit 100. 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 education of adolescents.

Ed. 452. INTERPRETATION OF STATISTICS USED IN EDUCATION

Fall term. 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.

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. 511. EDUCATIONAL PSYCHOLOGY

Fall term. Credit three hours. Permission of the instructor required. 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. Permission of the instructor required. M 4-6; third hour 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. 37 for description.

Ed. 613. SEMINAR IN EDUCATIONAL PSYCHOLOGY

Fall term. Credit three hours. Permission of instructor required. Hours to be arranged. Mr. Glock.

Topic to be announced.

Ed. 616. SEMINAR IN EDUCATIONAL RESEARCH

Fall term. Credit three hours. Prerequisite, 453 and 499 or permission of the instructor. Time to be arranged. Mr. Millman.

See p. 37 for description.

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. Not designed for project students earning a Master's degree.

Psych. 103. EDUCATIONAL PSYCHOLOGY

Spring term. Credit three hours. Prerequisite, an introductory course in psychology. Mr. Levin. (Equivalent of 411).

The major facts and principles of psychology bearing on educational practice and theory. Human learning, abilities, and group processes as they influence classroom learning will be stressed. Recent educational advances such as new curricula and programmed learning will be discussed in the light of contemporary psychological theories.

See courses listed in psychology, human development and family studies, anthropology, sociology, and industrial and labor relations for related offerings.

EXTENSION AND CONTINUING EDUCATION

Mr. J. Paul Leagans, chairman; Messrs. R. L. Bruce, A. E. Durfee, C. R. Harrington.

Ed. 522. EDUCATING FOR COMMUNITY ACTION

Spring term. Credit three hours. Open to juniors and seniors by consent. M W F 11:15. Mr. R. Bruce.

The design and execution of the educational aspects of community action programs, including cooperative extension.

[Ed. 523. ADMINISTRATION AND SUPERVISION OF EXTENSION AND ADVISORY PROGRAMS]

Fall term. Credit three hours. W 1:25-3:20 and one hour to be arranged. Mr. R. Bruce. Not given in 1970-71.

An application of the principles of administration and supervision to the problems of organizing and operating informal education and development programs.

Ed. 524. DESIGNING PROGRAMS OF DEVELOPMENTAL CHANGE

Fall term. Credit three hours. For graduate students interested in the principles and procedures basic to the development and execution of extension, adult and community development; and other programs of continuing education. T 1:25-4:20. Mr. Leagans.

A study of the theories, problems, principles, and general procedures commonly involved in developing and carrying out successful educational programs to promote economic and social change.

Ed. 525. COMMUNICATING TECHNOLOGY

Spring term. Credit three hours. For graduate students interested in a comprehensive understanding of theory, principles, procedures, and techniques related to the communication of technology as applied in adult, extension, and community development programs. T 1:25-4:20. Mr. Leagans.

Analysis of basic elements in the communications process with emphasis on the nature and role of the communicator, audience, message, channels, message treatment, and audience response.

Ed. 527. EVALUATION OF EDUCATIONAL AND ADVISORY PROGRAMS

Fall term. Credit three hours. Mr. R. Bruce.

Conceptualization and design of evaluation procedures as a basis for program management decisions.

[Ed. 621. SPECIAL STUDIES IN EXTENSION EDUCATION]

Fall term. Credit two hours. Lectures, individual time to be arranged. Messrs. Leagans and R. Bruce. Not offered in 1970-71.

The objective is to provide assistance in thesis preparation to graduate students in extension education. The course consists of three parts: (1) exploration of potential fields and specific delineation of thesis areas; (2) setting up a plan of thesis organization including establishment of objectives or hypotheses, preparation of questionnaires or other research instruments, collection, analysis, and interpretation of data in line with objectives; and (3) preparation of the thesis, its writing, editing, revising, and styling.

Ed. 626. SEMINAR: COMPARATIVE EXTENSION EDUCATION SYSTEMS

Fall term. Credit two hours. Open to graduate students and advanced undergraduates. Th 1:25-3:20. Mr. Leagans.

A comparative analysis of the objectives, organization, procedures, achievements, and problems of selected extension education and community development agencies and programs in different circumstances of economic, social, and political development and in different agricultural resource environments. Country programs for major consideration are selected in line with the interests of seminar members.

Ed. 627. SEMINAR: IMPLEMENTING EXTENSION AND COMMUNITY DEVELOPMENT PROGRAMS IN DEVELOPING COUNTRIES

Spring term. Credit two hours. Open to advanced students with experience in rural development programs by permission of the instructor. Th 1:25-3:20. Mr. Leagans.

Analysis of major problems of implementing programs for economic and social change in non-Western cultures. Key problems including administrative organization and policy, selection and training of personnel, setting objectives

and goals, financing programs, communication, and evaluation considered along with others suggested by seminar members.

Ed. 628. SEMINAR: CURRENT PROBLEMS AND ISSUES IN EXTENSION EDUCATION

Spring term. Credit two hours. Open by permission of instructor to graduate students in extension education or other fields with special relevance to the seminar topic. W 1:25-3:20. Mr. R. Bruce.

A major area of concern to extension education will be selected for intensive study by participating students and faculty.

I.A.D. 600. SEMINAR: INTERNATIONAL AGRICULTURAL DEVELOPMENT

Fall and spring terms. Without credit. Mr. Turk and staff. (*See Announcement of the College of Agriculture for description.*)

GUIDANCE AND PERSONNEL ADMINISTRATION

Mr. A. G. Nelson, chairman; Messrs. H. G. Andrus, and D. Hedlund.

Ed. 580. STUDENT CULTURE IN THE AMERICAN COLLEGE

Spring term. Prerequisite, permission of the instructor. Credit three hours. M W 1:25-2:45. Mr. Hedlund.

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. Mr. Hedlund.

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. Mr. Nelson.

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

Spring term. Credit two hours. For graduate students only. Prerequisite, permission of instructor. M 4:15-6. Mr. Nelson.

Principles and techniques of counseling with individuals concerning various types of educational, vocational, and social adjustment problems at the high school and college levels.

Ed. 584. GROUP TECHNIQUES IN GUIDANCE

Spring term. Credit two hours. Prerequisite, permission of the instructor. T 4:15-6. Mr. Nelson.

Methods and materials for presenting educational and occupational information to students. Theory and practice of group guidance, and counseling in a group setting.

Ed. 585. OCCUPATIONAL AND EDUCATIONAL INFORMATION

Fall term. Credit four hours. Prerequisite, permission of the instructor. M 4:15-6. Field trips and laboratory, to be arranged. Mr. Nelson.

Survey and appraisal of occupations and training opportunities; study of sources of educational and vocational information; job analysis; vocational trends. Field trips to places of employment. Practicum exercises.

Ed. 602. FIELD LABORATORY IN STUDENT PERSONNEL ADMINISTRATION

Either term. Credit and hours to be arranged. Prerequisite, permission of instructor. Members of the staff.

Directed field project in student personnel administration.

Ed. 681. SEMINAR IN STUDENT PERSONNEL ADMINISTRATION

Either term. Prerequisite, permission of the instructor. Credit as arranged. 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, along with many of the courses listed above:

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

Mr. D. B. Gowin, chairman; Mr. R. H. Ennis, Miss Isabel Peard, Mr. F. H. Stutz.

Ed. 470. EDUCATIONAL ISSUES IN A DEMOCRACY

Either term. Credit three hours. Open to juniors, seniors, and graduate students. Registration in morning sections limited to fifty students; afternoon sections, twenty-five students. M W F 10:10. T Th 2:30-4. Miss Peard, and Messrs. Ennis, Gowin, and Stutz. Special honors tutorial is offered by Mr. Gowin.

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. Ennis.

A consideration of definition, explanation, proof, and the structure of subject matter as they bear upon the work of the classroom teacher.

Ed. 472. PHILOSOPHERS ON EDUCATION

Fall term. Credit three hours. For graduates and advanced undergraduates. Admission by consent only. M W 2:30-4. Miss Peard.

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 1970-71: Structure of Knowledge.

Ed. 563. SOCIAL CONTEXT OF EDUCATIONAL ADMINISTRATION

Spring term. Credit three hours. M W 2:30-4.

See p. 26 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 1970-71.

An examination of the role of education in shaping American society. Chief emphasis will be on the period from 1820 to 1900.

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. W F 2:30-4.

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. 671. SEMINAR: ANALYSIS OF EDUCATIONAL CONCEPTS

Spring term. Credit three hours. Admission by consent. W 2:30-4:30. Mr. Ennis.

Topic for 1970-71: Hypothesis.

Ed. 672. SEMINAR IN EDUCATIONAL CLASSICS

Fall term. Credit three hours. Admission by consent. Miss Peard.

Topic for 1970-71: Education as an Engaging Event.

Ed. 673. SEMINAR ON DEWEY

Fall term. Credit three hours. W 12:20-2:20. Consent of instructor required. 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 3:35-5:35. Mr. Stutz.

Topic for 1970-71: Minority Groups.

Ed. 699. CONCEPTUAL PROBLEMS IN EDUCATIONAL INQUIRY

Fall term. Credit three hours. Primarily for doctoral candidates in their second year of residence. Prerequisite, 599 or equivalent, or permission of instructor. W 2:30-4:30. Mr. Ennis.

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

Soc. 341. EDUCATIONAL SOCIOLOGY

HOME ECONOMICS EDUCATION

Miss Sara Blackwell, chairman; Misses Margaret Elliott and Irene Imbler, Mrs. Marjorie Loucks, Miss Marion Minot, Mrs. Helen Nelson, Miss Kathleen Rhodes, and Mrs. Margaret Taylor.

Students interested in community service education, health education, or home economics education are advised to request current information from: Chairman, Department of Community Service Education, Martha Van Rensselaer Hall. Specific course descriptions are omitted here because the impact of College reorganization (July 1, 1969) on course offerings for 1970-71 had not yet been determined when this *Announcement* went to print.

SCIENCE AND NATURE EDUCATION

Mr. J. D. Novak, chairman; Miss Anne LaBastille, Messrs. R. B. Fischer, V. 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 eighteen 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 first-hand 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. NATURAL HISTORY LITERATURE

Spring term. Credit two hours. Open only to students above sophomore rank. T Th 11:15. Stone 7. Mr. Fischer.

A survey of writings in the fields of nature and conservation education, with special attention to outstanding writers and their works, designed for teaching and for leisure time reading. Recommended for those who plan to take 403.

Ed. 403. NATURAL HISTORY WRITING

Fall term. Credit two hours. Registration by permission. Intended for seniors and graduate students. T Th 11:15. Stone 7. Mr. Fischer.

Designed for persons who wish to perfect their ability to write popular articles for the specialized fields of natural history and conservation. Subject

matter, types of articles, and outlets for students' articles are covered, along with the preparation of news releases, posters, brochures and periodical publications.

Ed. 404-405. FIELD NATURAL HISTORY

Fall or spring term. Credit three hours. A full-year course; may be taken either term or both terms. Open only to students above sophomore rank. Limited to eighteen students a section. Friday section primarily for those experienced in field biology. Lecture, M 10:10. Weekly field trips and lecture, T or F 1:25-4:25. Stone 7. Mr. Fischer.

Devoted to studies of local plants and animals, their ecology and their use in nature interpretation, conservation education, and field biology programs. This is a methods and materials course useful to teachers at all levels.

Ed. 407. THE TEACHING OF ELEMENTARY SCHOOL SCIENCE

Fall term. Credit three hours. Registration by permission. Limited to eighteen students. Lecture, W 1:25; practical exercises, W 2:30-4:25 and one other period to be arranged. Stone 7. Mr. Rockcastle.

The content and methods of elementary-school science and nature study, with field work and laboratory experience useful in classroom and camp. 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 twenty students per section. Fall term Th 1:25-4:25 and hours for observation to be arranged; Spring term M or Th 1:25-4:25. Staff.

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. 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. 505. NATURE CENTER OPERATION AND PROGRAMMING

Fall term. Credit three hours. Open only to students above sophomore rank. M W F 10:10. Stone 7. Miss LaBastille.

Designed for interpretive naturalists and others who will be responsible for showing persons their place in the environment they share with other organisms, explaining how man's actions affect the living things around him, and teaching what can and must be done to preserve the quality of the environment. Course content emphasizes methods of interpreting nature through the

nature center program, and includes constructing teaching aids, designing and building nature trails, design and organization of a live museum, cataloging and storing teaching materials, making bulletin board displays, developing interest corners, guiding nature walks, making and presenting slide talks, giving lectures with visual aids, setting up photographic exhibits, and using schoolyard and neighboring teaching resources.

Ed. 507. THE TEACHING OF SCIENCE

Fall term. Credit three hours. For graduate students interested in elementary, secondary, or college science teaching. Limited to twenty students. M 1:25-4:25. Stone 7. 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. 508. NATURE CENTER DEVELOPMENT AND DIRECTION

Spring term. Credit three hours. Open only to students above sophomore rank. M W F 10:10. Stone 7. Miss LaBastille.

Providing directors with the managerial skills needed for successful operation of a nature center, the course is organized around techniques such as recruiting, fund raising, publicity, personnel management, brochure production, public relations, allocating funds and budgeting, enlisting local support, liaison with schools, program development, natural area surveys, planning new buildings, adding to existing facilities, and determining staff needs; also, nature center directors as local conservation catalysts.

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 twenty 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 (S and U Exclusive)

Fall or spring term. Credit one hour. Required of graduate students who major or minor in this division. M 4:30-6. Stone 7. Miss LaBastille, Messrs. Fischer, Novak, and Rockcastle.

GENERAL

Ed. 499. INFORMAL STUDY IN EDUCATION

Maximum credit, three hours each term. 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. Members of the staff. 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.

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. 33 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. 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. Ennis and other 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.

FACULTY

(As of December 1, 1969.)

UNIVERSITY ADMINISTRATION

Dale R. Corson, President of the University
Robert A. Plane, Acting University Provost
Mark Barlow, Jr., Vice President for Student Affairs
Stuart M. Brown, Jr., Vice President for Academic Affairs
John E. Burton, Vice President—Business
Lisle C. Carter, Jr., Vice President for Social and Environmental Studies
W. Donald Cooke, Vice President for Research
Lewis H. Durland, University Treasurer
W. Keith Kennedy, Vice Provost
E. Hugh Luckey, Vice President for Medical Affairs
Thomas W. Mackesey, Vice President for Planning
Paul L. McKeegan, Director of the Budget
Robert D. Miller, Dean of the University Faculty
Steven Muller, Vice President for Public Affairs
Arthur H. Peterson, University Controller
Neal R. Stamp, Secretary of the Corporation and University Counsel

STAFF

Sara E. Blackwell, Head, Department of Home Economics Education; Professor of Home Economics Education. Ph.D., University of Minnesota
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 Elementary Education. Ph.D., University of Minnesota
Barry B. Adams, Assistant Professor of English. Ph.D., University of North Carolina
Howard G. Andrus, Director, Educational-Vocational Guidance Office; Professor of Guidance and Personnel Administration. Ph.D., Cornell University
Joe P. Bail, Professor and Instructional Materials Specialist in Agricultural Education. Ph.D., Michigan State University
Arthur L. Berkey, Assistant Professor of Agricultural Education. Ph.D., Michigan State University
Robert L. Bruce, Associate Professor of Extension Education. Ph.D., Cornell University
Ralph N. Campbell, Professor of Industrial and Labor Relations. M.B.A., Harvard Graduate School of Business Administration
Brian S. Crittenden, Visiting Professor of Philosophy of Education. Ph.D., University of Illinois
Harold R. Cushman, Professor of Agricultural Education. Ph.D., Cornell University
Robert Davis, Visiting Professor of Education. Ph.D.,
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
- Margaret Elliott, Instructor in Home Economics Education. M.S. in Ed., Cornell University
- Robert H. Ennis, Professor of Philosophy of Education. Ph.D., University of Illinois
- Jean Failing, Professor of Home Economics and Coordinator of Resident Instruction, College of Home Economics. 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, Associate Professor of Mathematics Education. Ph.D., Cornell University
- Marvin D. Glock, Professor of Educational Psychology and Director, University Testing and Service Bureau. Ph.D., University of Iowa
- D. Bob Gowin, Associate Professor of Educational Foundations. Ph.D., Yale University
- Emil J. Haller, Assistant Professor of Educational Administration. Ph.D., University of Chicago
- John S. Harding, Professor of Child Development and Family Relationships. Ph.D., Harvard University
- Clifford R. Harrington, Associate Director of Programs and Professor in Extension Service, Department of Education. M.S., University of Chicago
- Dalva E. Hedlund, Assistant Professor of Occupational Psychology and Guidance. Ph.D., Colorado State University
- Peter J. Hilton, Professor of Mathematics. Ph.D., Cambridge University
- Lawrence B. Hixon, Professor of Education and Coordinator, Educational Placement. Ed.D., Syracuse University
- Anne LaBastille, Assistant Professor of Science Education. Ph.D., Cornell University
- J. Paul Leagans, Professor of Extension Education. Ph.D., University of Chicago
- Harry Levin, Chairman, Psychology, and Kenan Professor of Psychology. Ph.D., University of Michigan
- George W. McConkie, Assistant 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 Home Economics Education. Ph.D., Cornell University
- A. Gordon Nelson, Professor of Counseling Psychology. Ph.D., New York University
- Helen Y. Nelson, Associate Professor of Home Economics Education. Ph.D., University of Minnesota
- Benjamin Nichols, Professor of Electrical Engineering. Ph.D., University of Alaska
- 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

40 FACULTY

- Isabel J. Peard, Professor of Education. Ph.D., Cornell University
Kathleen Rhodes, Professor of Home Economics 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
Frederick H. Stutz, Professor of History of Education. Ph.D., Cornell University
Lyle L. Wicks, Instructional Materials Specialist in Agricultural Education. M.S., Cornell University

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
E. Laurence Palmer, Professor of Education (Nature Study and Science Education). Ph.D., Cornell University
H. Irene Patterson, Professor of Home Economics Education. M.S., University of Minnesota
William A. Smith, Professor of Education. Ph.D., Cornell University
Ethel Waring, Professor of Child Development and Family Relations. Ph.D., Columbia University

Index

- Admission, graduate, 14, 16
Agricultural Education, 6, 21
Assistantships, 18
Calendar, 2
Candidate for degree only, 19
Courses of instruction, 21-37
Curriculum and Instruction, 6, 23
Development of Human Resources, 7, 25
Directed Field Experience, 17
Doctor of Education degree, 16
Educational Administration, 7, 26
Educational Placement, 20
Educational Psychology and Measurement, 8, 27
Extension and Continuing Education, 9, 29
Extramural courses, 20
Faculty, 38
Fees, 19
Fellowships and scholarships, 18
Final examination, 16, 18
Financial aid, 18
General education courses, 36
General degrees, 15
Graduate Record Examination, 14
Graduate study, 14
Guidance and Personnel Administration, 10, 31
History, Philosophy, and Sociology of Education, 11, 32
Home Economics Education, 11, 34
Language requirement, 15
Majors and minors, approved subjects for, 15
Master of Arts in Teaching degree, 16
Nondegree candidate, 14
Qualifying examination, 18
Personnel Administration, 10, 31
Pre-Service Programs, 13
Professional degrees, 15
Program of studies, 16, 17
Provisional admission, 14
Registration deposit, 19
Residence, continuity of, 14
Residence, method of earning, 16, 17
Residence requirement, 16, 17
Residence, transfer of, 15, 17
Science and Nature Education, 12, 34
Special Committee, 16, 17
Summer Session, 20
Teaching experience, 15
Thesis, 17
Thesis fee, 19
Tuition and fees, 19
Tuition, waiver of, 19