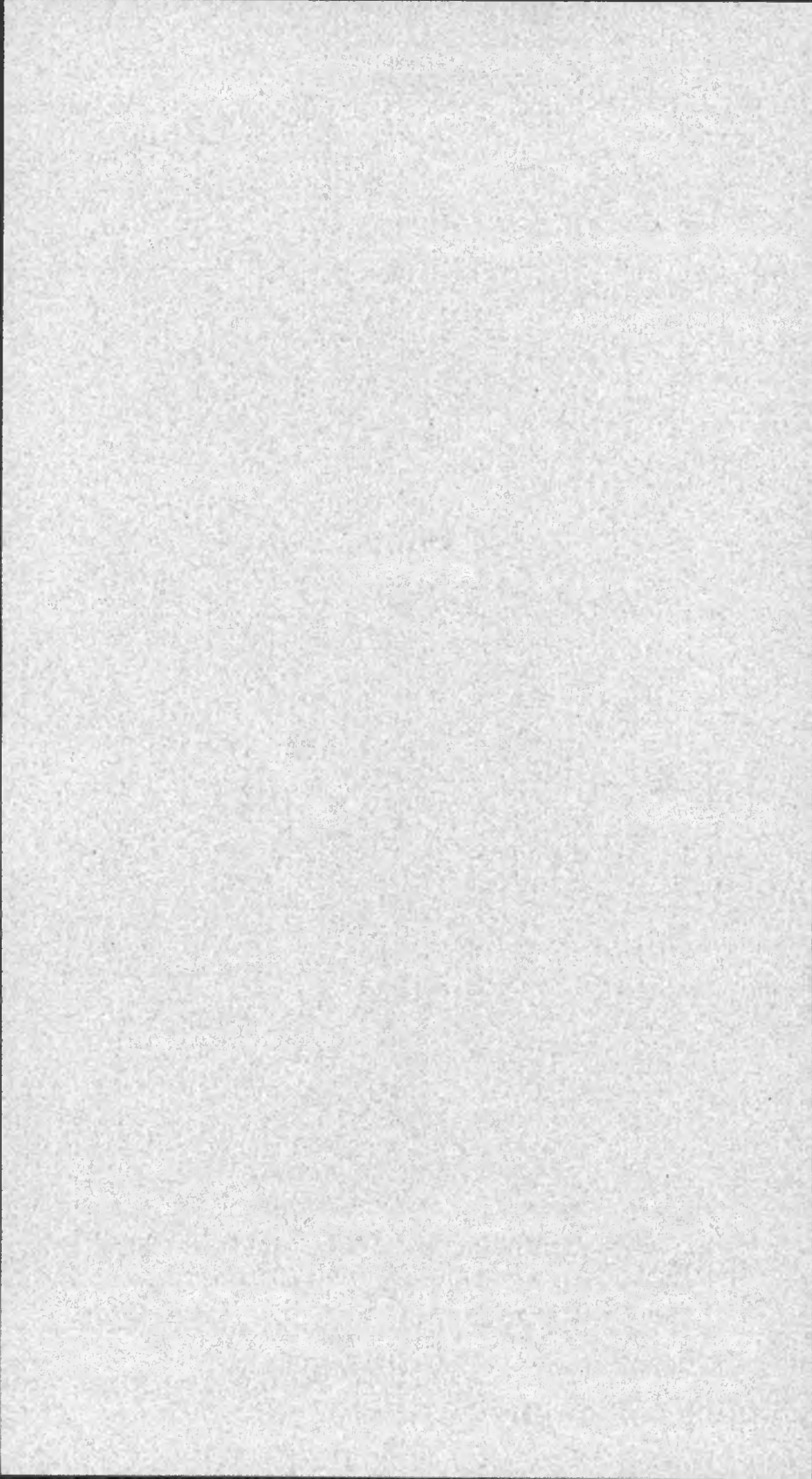




Cornell  
University  
ANNOUNCEMENTS

*Education*

1969-70



Cornell University

*Education*

1969-70

# Cornell Academic Calendar

|   | 1968-69 *   | 1969-70 *    |
|---|-------------|--------------|
| Registration, new students                | F, Sept. 13 | Th, Sept. 11 |
| Registration, old students                | S, Sept. 14 | F, Sept. 12  |
| Fall term instruction begins, 7:30 A.M.   | M, Sept. 16 | M, Sept. 15  |
| Midterm grade reports due                 | S, Oct. 26  | S, Oct. 25   |
| Thanksgiving recess:                      |             |              |
| Instruction suspended, 1:10 P.M.          | W, Nov. 27  | W, Nov. 26   |
| Instruction resumed, 7:30 A.M.            | M, Dec. 2   | M, Dec. 1    |
| Fall term instruction ends, 1:10 P.M.     | S, Dec. 21  | S, Dec. 20   |
| Christmas recess                          |             |              |
| Independent study period begins           | M, Jan. 6   | M, Jan. 5    |
| Final examinations begin                  | M, Jan. 13  | M, Jan. 12   |
| Final examinations end                    | T, Jan. 21  | T, Jan. 20   |
| Interession begins                        | W, Jan. 22  | W, Jan. 21   |
| Registration, new students                | F, Jan. 31  | Th, Jan. 29  |
| Registration, old students                | S, Feb. 1   | F, Jan. 30   |
| Spring term instruction begins, 7:30 A.M. | M, Feb. 3   | M, Feb. 2    |
| Deadline: changed or make-up grades       | M, Feb. 10  | M, Feb. 9    |
| Midterm grade reports due                 | S, Mar. 15  | S, Mar. 14   |
| Spring recess:                            |             |              |
| Instruction suspended, 1:10 P.M.          | S, Mar. 29  | S, Mar. 28   |
| Instruction resumed, 7:30 A.M.            | M, Apr. 7   | M, Apr. 6    |
| Spring term instruction ends, 1:10 P.M.   | S, May 17   | S, May 16    |
| Independent study period begins           | M, May 19   | M, May 18    |
| Final examinations begin                  | M, May 26   | M, May 25    |
| Final examinations end                    | T, June 3   | T, June 2    |
| Commencement Day                          | M, June 9   | M, June 8    |
| Deadline: changed or make-up grades       | M, June 16  | 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 60. Number 14. Dec. 18, 1968. Published twenty-two times a year: four times in August; three times in March and October; twice in May, July, September, and November; once in January, April, 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 14850.

# 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                        |
| 38 | Science and Nature Education                    |
| 40 | General   |
| 42 | FACULTY   |
| 45 | INDEX   |

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 interest and concern for the 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 Home Economics Education in the New York State College of Home Economics.

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 the teaching of 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 select sequences of courses and practicum experiences suited to individual needs and goals, and 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 the 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 (school district administrator, instructional administrator-principal, instructional administrator-curriculum). Successful completion of a prescribed

program insures certification in New York State if experience requirements are also met.

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

## EDUCATIONAL PSYCHOLOGY AND MEASUREMENT

Educational Psychology is a behavioral science. Its concepts and principles comprise the body of knowledge relevant to the improvement of classroom learning. Many disciplines including anthropology, child development, psychology, and sociology, contribute to educational psychology through 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 Psychology, or Child Development and Family Relationships, 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 embark upon 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 interests 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 evalu-

ation, 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.

For further information, write to Head, Department of Home Economics Education, 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 development, 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.

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.

Career opportunities for men and women as public school teachers are unlimited. The Educational Placement Bureau each year receives thousands of vacancy notices. Candidates find positions in schools in all parts of this country and abroad. Because requirements for licensure vary from state to state, completion of a Cornell program does not automatically qualify a student for a teaching certificate in another state.

Five years of preparation is currently required for permanent certification to teach in New York, and increasingly is required in other states. 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 non-candidate 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 those periods.

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 have scores submitted from the Graduate Record Examinations (the Aptitude Test) before admission.

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 estimate, 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.

Graduate students studying for the Ph.D. degree in the Field of Education are required to demonstrate a satisfactory reading knowledge of at least one foreign language.

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.

The maximum number of residence units which may be earned through extramural registration or in summer sessions at Cornell or in similar manner at other centers of graduate study is two.

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 in addition to the entrance examination required of all candidates. These are (1) a qualifying examination and (2) a final examination. Although other members of the faculty may be invited to participate in these examinations, the Special Committee alone decides whether the candidate has passed or failed.

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 the 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 twenty 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 \$2,700 to \$4,000, with appointments ranging from nine to twelve months. In the College of Agriculture and the College of Home Economics 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 \$35.00 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 20 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 \$35.00. A thesis fee in the amount of \$30.00 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.

Professor L. B Hixon serves as the Certification Officer for the University and is the Coordinator of Teacher Placement. Further information may be obtained from the Department of Education, Stone Hall.

## DIVISION OF SUMMER SESSION AND EXTRAMURAL COURSES

The Division provides opportunity for employed persons to enroll in courses at both the graduate and undergraduate levels. It also is the administrative office for the academic offerings of the various colleges and schools of the University during the summer.

The Division accepts for registration in the fall and spring terms of the academic year those students who qualify for part-time study. Available courses are the same as those offered for the full-time students and, with few exceptions, are taken as scheduled for them.

Students registered in the Summer Session or in the Extramural Division earn regular University credit officially recorded by the registrar. Such credit may be applied toward meeting requirements for academic degrees subject to the approval of the degree-granting institution. In both divisions tuition is charged by the credit hour. In the Extramural Division students are normally limited to a course load of seven credit hours.

Candidates for a baccalaureate degree at Cornell University must obtain permission of their school or college to register in the Summer Session or in the Extramural Division.

Further information may be obtained from the Director of the 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 SECONDARY 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

Fall or 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.

## 22 AGRICULTURAL EDUCATION

### 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.

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

Fall term. Credit two or three hours. M 2:30-4:25.

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

Spring term. Credit three hours. M F 1:25-2:55.

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. Drake.

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. Not given in 1969-70.

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 level.

### Ed. 538. TEACHING GENERAL AGRICULTURE IN THE SECONDARY SCHOOLS

Spring term. Credit two hours. F 4:15-6:00. Mr. Tom.

The organization, purpose, and content of courses in agriculture in junior and senior high schools to serve those who elect to study agriculture for its general educational values in preparation for everyday living.

### Ed. 539. EVALUATING PROGRAMS OF 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. H. A. Geiselman, K. J. Molchen, J. D. Novak, and W. J. Pauk, Miss Isabel Peard, Mr. V. N. Rockcastle, Mrs. Milacent Ocvirk, Messrs. J. Holman, C. L. Pfaff, and W. R. Teetor.

#### Ed. 407. THE TEACHING OF ELEMENTARY SCHOOL SCIENCE

Fall term. Credit three hours. Registration by permission. Mr. Rockcastle. (See page 39 for description.)

#### Ed. 408. METHODS OF TEACHING SCIENCE IN SECONDARY SCHOOLS

Fall or spring term. Credit three hours. Registration by permission. Mr. Molchen. (See page 39 for description.)

#### Ed. 440A. OBSERVATION AND STUDENT TEACHING

Fall or spring term. Credit six hours. Hours to be arranged. Mrs. Ocvirk, Mr. Pfaff, and Mr. Teetor.

For undergraduate students preparing to teach English, languages, and mathematics in the secondary schools. (Prospective science teachers, see Ed. 408, page 39). Opportunities to observe the work of experienced teachers and to do directed teaching in a secondary school are provided. Seminars and student teaching conferences arranged with emphasis on discussion of teaching problems. Students should also enroll in the appropriate special methods course which follows.

#### Ed. 440E. TEACHING ENGLISH IN SECONDARY SCHOOLS

Fall and spring terms. Credit four hours. Hours to be arranged. Miss Peard and Mr. Adams.

Taught jointly by the Departments of English and Education. Emphasis on the teaching of reading, writing, and language. Undergraduates accepted for the English-teaching program should register in the term immediately prior to that in which their practice teaching is scheduled; all others should see Miss Peard before registering.

#### Ed. 440L. TEACHING LANGUAGES IN SECONDARY SCHOOLS

Fall or spring term. Credit three hours. Hours to be arranged. Mr. Teetor.

#### Ed. 440M. TEACHING MATHEMATICS IN SECONDARY SCHOOLS

Fall or spring term. Credit three hours. Hours to be arranged. Mr. Holman.

Ed. 440S. TEACHING SOCIAL STUDIES IN SECONDARY SCHOOLS  
Offered in the summer only. Credit three hours.

Ed. 444. SEMINAR IN THE TEACHING OF SECONDARY  
MATHEMATICS

Spring term. Credit three hours. T Th 4:00-5:15. 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.

Ed. 471. LOGIC IN TEACHING

Spring term. Credit three hours. Mr. Ennis. (See page 33 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. Messrs. Geiselmann, and Molchen; Miss Peard and Miss Wardeberg.

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. Th 4:00-6:00 and one hour to be arranged. Members of the staff.

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. T Th 2:30-3:45. Miss Wardeberg.

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

Spring term. Credit and hours as arranged. Miss Wardeberg.

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

## [Ed. 549. MODERN MATHEMATICS FOR THE ELEMENTARY TEACHER]

Fall term. Credit three hours. T 1:25-3:35. Mr. Geiselman. Not given in 1969-70.

An introduction to the new topics, materials, and techniques which are reflected in modern mathematics curricula, grades K-6.

## Ed. 565. SUPERVISION OF INSTRUCTION

Spring term. Credit three hours. Miss Wardeberg.

(See page 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.

## EDUCATIONAL ADMINISTRATION

Mr. E. J. Haller, Chairman; Mrs. Joan R. Egner, 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. Mrs. Egner.

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 4:00-6:00. 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 2:30-4:00.

The purpose of this course is to familiarize the student with environmental factors which influence administrative behavior in formal organizations. Three perspectives will be used in viewing organizations in their social context. Using a structural approach, discussion will center on the links between the status divisions of society and organizations. The political approach will examine power relations between organizations and their environment. The cultural perspective will examine the role of norms, values and ideologies in organizational behavior. The course will be organized as a seminar. Students will be expected to conduct and report a small scale empirical research project.

**Ed. 564. SCHOOL FINANCE AND FACILITIES**

Spring term. Credit three hours. Prerequisite, Ed. 561 or equivalent. Time to be arranged. Mr. Haller and staff.

The role of the administrator in providing leadership in the provision and maintenance of funds and facilities. Marshaling personnel and material for school operation. Sources of school support. Estimation, interpretation, and management of expenditures. Planning, constructing, and financing a school building. Utilization, operation, and management of the school plant.

**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; fundamental principles and various procedures will be considered. 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 4:00-6:00. Mr. Hixon.

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

**Ed. 569. PERSONNEL ADMINISTRATION**

Fall term. Credit three hours. Th 4:00-6:00. Mrs. Egner and Mr. Haller.

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. Prerequisites, Ed. 561 or Ed. 569 or consent of instructor. Time to be arranged. Mrs. Egner and staff.

Planned for advanced students in administration. Topic for 1969-70 to be announced.

## 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 interested in the educational process. 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. 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 Ed. 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 Ed. 452 (may be elected concurrently), or permission of the instructor. T Th 8:00-9:55. 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. Glock.

A basic course in educational psychology for graduate students.

**Ed. 551. EDUCATIONAL MEASUREMENT**

Spring term. Credit three hours. Permission of the instructor required. M 4:00-6:00; 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 4:00-6:00. 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 and spring term. Credit three hours. Prerequisite, one course in statistics or Ed. 452 elected concurrently. T Th 2:30-4:00. Mr. Millman and staff.

See page 40 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, Ed. 453 and Ed. 499 or permission of the instructor. Time to be arranged. Mr. Millman.

See page 41 for description.

**Ed. 617. SEMINAR IN VERBAL LEARNING**

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 materials.

**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 Ed. 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 programed learning will be discussed in the light of contemporary psychological theories.

See courses listed in psychology, child development and family relations, 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.

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

## 30 EXTENSION, CONTINUING EDUCATION

### 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. Lecture, M 10:10. Lecture-discussion, T 1:25-3:20. 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. Lecture, M 10:10. Lecture-discussion, T 1:25-3:20. 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. 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 1969-70.

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.

H.E.Ed. 411. ADULT EDUCATION

Fall term. Credit two or three hours. For seniors and graduate students. (See page 35 for description.)

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 4:15-6:00. 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 4:15-6:00. 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.

## 32 HISTORY, PHILOSOPHY, SOCIOLOGY

### Ed. 584. GROUP TECHNIQUES IN GUIDANCE

Spring term. Credit two hours. Prerequisite, permission of the instructor. T 4:15-6:00. 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 4:15-6:00. 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 two hours per term. Maximum credit four hours. F 9:05-11:00. 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. F. H. Stutz, Chairman; Mr. R. H. Ennis, Mr. D. B. Gowin, Miss Isabel Peard.

### Ed. 470. EDUCATIONAL ISSUES IN A DEMOCRACY

Either term. Credit three hours. Open to juniors by consent, 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 study of the persistent problems of education in a democracy.

**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 2:00-3:30. 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. Mr. Gowin.

Topic for 1969-70: Structure of Knowledge.

**Ed. 563. SOCIAL CONTEXT OF EDUCATIONAL ADMINISTRATION**

Spring term. Credit three hours. M W 2:30-4:00.

See page 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 4:00-6:00. Mr. Stutz.

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**

Spring term. Credit three hours. For graduate students. M 4:00-6:00. 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 2:30-4:00.

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 1969-70: To be announced.

**Ed. 672. SEMINAR IN EDUCATIONAL CLASSICS**

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

Topic for 1969-70: To be announced.

**Ed. 673. SEMINAR IN JOHN DEWEY'S PHILOSOPHY OF EDUCATION**

Fall term. Credit three hours. For graduate students. Consent of instructor required. Prerequisite, prior course in philosophy or philosophy of education. Mr. Gowin.

## 34 HOME ECONOMICS EDUCATION

Dewey's conceptions of the nature of experience, knowledge, value, and metaphysics will be analyzed, as well as his method of philosophizing. Students will be expected to read widely in Dewey's writings and in the writings of his critics and disciples. Primary aim is a mature, 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 1969-70: To be announced.

### Ed. 699. CONCEPTUAL PROBLEMS IN EDUCATIONAL INQUIRY

Fall term. Credit three hours. Primarily for doctoral candidates in their second year of residence. Prerequisite, Ed. 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. 342. EDUCATIONAL SOCIOLOGY

## HOME ECONOMICS EDUCATION

Miss Sara Blackwell, Chairman; Miss Jean Cooper, Mrs. Ethelwyn Cornelius, Misses Margaret Elliott and Irene Imbler, Mrs. Marjorie Loucks, Miss Marion Minot, Mrs. Helen Nelson, Miss Kathleen Rhodes and Mrs. Margaret Taylor.

### H.E.Ed. 300. SPECIAL STUDIES FOR UNDERGRADUATES

Fall and spring term. Credit and hours to be arranged. For special arrangement of course work necessitated because of previous training. Department faculty.

Students prepare two copies of a description of the study they wish to undertake. One, signed by the instructor directing it and the head of the Department, must be filed with preregistration materials. The second copy is left with the instructor. Students obtain form to be used from their counselors.

### H.E.Ed. 400. SPECIAL STUDIES FOR UNDERGRADUATES

Fall and spring term. Credit and hours to be arranged. (a) For independent study by an individual student in advanced work not otherwise provided in the Department; or (b) for study, on an experimental basis, with a group of students in advanced work not otherwise provided in the department. Department faculty.

Students prepare two copies of a description of the study they wish to undertake. One, signed by the instructor directing it and the head of the Department, must be filed with preregistration materials. The second copy is left with the instructor. Students obtain form to be used from their counselors.

### H.E.Ed. 410. THE HOME ECONOMIST AS A TEACHER

Fall term. Credit three hours. Open to upperclassmen and graduate students. T Th 11:15 and one hour to be arranged. Miss Rhodes.

Designed for students who plan to be extension agents, dietitians, social

workers, home service representatives or youth group leaders, or who plan to undertake other work which will involve teaching in informal situations. Consideration will be given to social-psychological factors affecting the teaching-learning process, approach to different age and ability levels, use of appropriate media for different purposes, and various instructional techniques applicable to different groups of learners. Opportunity will be provided for observation and participation in teaching.

#### H.E.Ed. 411. ADULT EDUCATION

Spring term. Credit three hours. Open to upperclassmen and graduates. Prior completion of H.E.Ed. 410 or 440 strongly recommended. T Th 3:35-4:25 and one hour to be arranged. Miss Imbler.

Course focuses on broad aspects of adult education such as philosophy of adult education, sociological factors affecting adult education program development in communities, psychology of adults as learners, principles of program planning and evaluation. Opportunity is provided for observation of adult education programs in the Ithaca area.

#### H.E.Ed. 440-441-442. THE ART OF TEACHING

To be taken in two successive terms, 440 in the first and both 441 and 442 in the second. Open to juniors and seniors preparing to teach home economics in the public schools. Miss Minot, coordinator, assisted by Misses Cooper and Elliot, Mrs. Cornelius, Mrs. Nelson, Mrs. Loucks, Mrs. Taylor, and cooperating teachers.

This sequence of courses involves observation and participation in the home economics program of one or more schools in communities near Ithaca. H.E.Ed. 440 is offered on a regular schedule throughout each semester, but special scheduling is required for H.E.Ed. 441 and 442.

*It is recommended that students use public transportation in traveling to and from the student teaching centers.*

H.E.Ed. 440. Fall and spring term. Credit three hours. Discussion period, T 8:00, Th 8:00-9:55. Field work is required one half-day each week for six weeks for the purpose of visiting home economics programs in cooperating schools.

Consideration is given to (1) procedures for determining the scope and sequence of the content of home economics classes and (2) the choice of learning experiences appropriate for use in the secondary schools. Students have an opportunity to study the community and the place of home economics in the total educational program.

H.E.Ed. 441. Fall and spring term. Credit two hours. To be scheduled concurrently with H.E.Ed. 442, H.E.M. 302, and C.D.&F.R. 302. A two-week workshop is conducted at the beginning of the term. The Independent Study Period will be used for directed study related to student teaching. Hours to be arranged.

Consideration is given to major concerns related to the teaching of home economics at secondary and adult levels.

H.E.Ed. 442. Fall and spring term. Credit six hours. Student teaching full time for six weeks. When vacation of the cooperating school does not correspond to that of the University, each student will be expected to follow the vacation schedule of the particular school in which she is teaching.

Guided student teaching experience with students assigned to cooperating

public schools. Student teachers live in the school communities and work under the guidance of both local home economics teachers and Department faculty.

#### H.E.Ed. 500. SPECIAL PROBLEMS FOR GRADUATE STUDENTS

Fall and spring. Credit and hours to be arranged. For students recommended by their Chairmen and approved by the instructor in charge for independent, advanced work. Department faculty.

#### H.E.Ed. 540. SEMINAR IN A PHILOSOPHY OF ADULT EDUCATION. (S,U grades)

Fall term. Credit three hours. Enrollment with consent of the instructor. Limit fifteen. Hours to be arranged. Miss Imbler.

This course will be concerned with adult education as instrumental to the goal of self-realization, and will include an examination of research in adult psychology and adult learning relating to creativity and self-actualization. The course will be participant-directed and experience-oriented, with emphasis on process, encouraging innovative participation by seminar members. It is anticipated that each member of the seminar will wish to create an experience to be shared by the group and to complete some form of term project in which he is interested.

#### H.E.Ed. 549. CURRICULUM PLANNING IN HOME ECONOMICS

Spring term. Credit three hours. For high school and college teachers, administrators, and extension personnel. M W F 9:05. Miss Rhodes.

Attention is given to the social-cultural foundations of the home economics curriculum, social-psychological needs of learners, the influence of educational philosophy on curriculum planning, and curriculum planning for different age and ability levels.

Opportunity is given for students to relate curriculum principles to individual situations.

#### [H.E.Ed. 555. CROSS-CULTURAL ASPECTS OF HOME ECONOMICS EDUCATION]

Spring term. Credit three hours. Open to students who have had professional experience in countries other than the U.S. or by permission of the instructor. Prerequisite, an appropriate course in sociology or comparative education. T Th 1:00-2:30. Miss Rhodes. Not given in 1969-70.

A study of the economic, social, and political factors affecting education and the development of home economics programs in differing cultures. Students will have opportunity to analyze home economics programs in countries other than the U.S. and to evaluate methods of approach appropriate to various cultures.

#### H.E.Ed. 559. EVALUATION

Fall term. Credit three hours. For high school and college teachers, administrators, extension agents, and educational research workers. Students without experience in any of these professional positions are admitted by permission of the instructor. T Th 1:25-2:55. Mrs. Nelson.

Basic principles of evaluation studied in relation to specific methods of appraising educational programs or individual achievement. Opportunities will be given for constructing and using evaluation instruments.

#### H.E.Ed. 580. SEMINAR IN HOME ECONOMICS EDUCATION

Fall and spring term. Credit one hour. M 4:40. Department faculty.

An informal seminar planned for majors and minors in home economics education and for others who are interested. One major aspect of education will be considered each term. May be repeated for credit with permission of instructor.

#### H.E.Ed. 590. HOME ECONOMICS IN HIGHER EDUCATION

Fall term. Credit three hours. T Th 10:10 and one hour to be arranged. Miss Rhodes.

For students interested in preparing to teach at college level. Opportunities are provided for observation and analysis of college teaching in various aspects of home economics: the objectives of home economics in higher education; characteristics of college students and factors affecting student learning; principles influencing the selection of teaching procedures and materials in higher education; evaluation of college level programs and the college teacher of home economics.

#### H.E.Ed. 599. MASTER'S THESIS AND RESEARCH

Fall and spring term. Credit and hours to be arranged. Registration with permission of the chairman of the graduate committee and the instructor. Department graduate faculty.

#### [H.E.Ed. 660. SEMINAR IN EVALUATION]

Spring term. Credit two hours. Prerequisites, H.E.Ed. 559 and Education 453 or equivalent. T Th 2:30-4:00. Miss Blackwell. Not given in 1969-70.

Opportunity for intensive study of the literature concerning educational evaluation, for refinement of appraisal techniques, and for analysis and interpretation of data from current research.

#### H.E.Ed. 661-662. THE TEACHER EDUCATOR IN HOME ECONOMICS

For graduate students preparing for teacher education positions involving supervision of student teachers. Permission of the instructors is required. Previous experience in teaching home economics at the secondary level is required for H.E.Ed. 662.

H.E.Ed. 661. Fall term. Credit three hours. W 1:25-2:55. Observation and participation T 8:00, Th 8:00-9:55. Several half-day field trips. Mrs. Nelson.

Opportunity is provided for students to develop understanding of teacher education practices by observing and participating in H.E.Ed. 440. Participation involves teaching one or two lessons, and individual work with students. Additional experiences include observation of student teachers and of supervisory conferences in student teaching centers.

H.E.Ed. 662. Spring term. Credit four hours. Hours to be arranged. Miss Minot.

Observation and participation first half of the semester, and weekly half-day or full-day field trips for last half of the semester. Seminar is concerned with basic principles of supervision and their application to the preservice education of home economics teachers. Opportunity is provided for observation and participation in H.E.Ed. 441 and 442, including some teaching in the courses and the supervision of a student teacher.

#### H.E.Ed. 663. INTERNSHIP AND FIELD WORK IN TEACHER EDUCATION

Fall term. Credit two hours. Hours to be arranged. Misses Cooper and Minot, and Mrs. Nelson.

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

#### H.E.Ed. 670. ADMINISTRATION AND SUPERVISION PRACTICUM

Spring term. Credit two hours. (S U grades optional.) Prerequisite or parallel: one of the following, Ed. 561, H.E.Ed. 590, H.E. Ed. 662, or permission of the instructor. Hours to be arranged. Miss Rhodes.

Opportunity for analysis of principles of supervision and administration in educational institutions through directed observation of the organization of home economics programs at state or city level and in higher education. Approximate cost of field trips, \$25.00.

#### H.E.Ed. 699. DOCTORAL THESIS AND RESEARCH

Fall and spring term. Credit and hours to be arranged. Registration with permission of the chairman of the graduate committee and the instructor. Department graduate faculty.

## SCIENCE AND NATURE EDUCATION

Mr. J. D. Novak, Chairman; Messrs. R. B. Fischer, K. J. Molchen, V. N. Rockcastle.

#### [Ed. 401. OUR PHYSICAL ENVIRONMENT]

Spring term. Credit three hours. Open by permission only to juniors, seniors, and graduate students primarily interested in public school teaching. Limit eighteen students. Lecture, W 1:25; practical exercises W 2:30-4:25 and one hour to be arranged. Mr. Rockcastle. Not given in 1969-70.

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. Given in alternate years. T Th 11:15. Stone 7. Mr. Fischer. Not given in 1969-70.

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

#### Ed. 403. NATURAL HISTORY WRITING

Fall term. Credit two hours. Registration by permission. Intended for seniors and graduate students. T Th 11:15. Offered in alternate years. 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, Ed. 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 Ed. 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. Mr. Molchen.

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.

**Ed. 409. PRACTICE IN TEACHING SCIENCE IN SECONDARY SCHOOLS**

Fall or spring term. Credit six or twelve hours. Prerequisite, Ed. 408 and permission of the instructor. For seniors and graduate students. Hours to be arranged. Mr. Molchen and assistants.

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

**Ed. 505. THE TEACHING OF CONSERVATION**

Fall term. Credit two hours. Given in alternate years. Limit twenty students. T Th 11:15. Stone 7. Mr. Fischer.

With emphasis on teaching methods, this course shows students how to use their factual backgrounds to teach conservation concepts, issues and problems using a variety of approaches. Lectures, slide shows, film strips, television, motion pictures, conservation corners, and teacher workshops. Each student completes several projects plus a brief teaching internship with an experienced classroom teacher.

**Ed. 507. THE TEACHING OF SCIENCE**

Fall term. Credit three hours. For graduate students interested in elementary, secondary or college science teaching. Limited to twenty students. M 1:25-4:25. Stone 7. Mr. Novak.

## 40 GENERAL COURSES

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

### Ed. 509. DEVELOPMENT OF CURRICULUM IN SCIENCE

Spring term. Credit three hours. For graduate students interested in elementary, secondary or college science teaching. Limited to twenty students. M 1:25-4:25.

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. Messrs. Fischer, Molchen, 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 2:30-4:00.

See page 33 for description.

### Ed. 599. METHODS OF EDUCATIONAL INQUIRY

Fall and spring term. Credit three hours. Prerequisite one course in statistics or Ed. 452 elected concurrently. T Th 2:30-4:00. 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, Ed. 453 and Ed. 599 or permission of the instructor. Time to be arranged. Mr. Millman.

The topic this term is the design of educational experiments. It emphasizes the design of controlled, comparative experiments for the purpose of testing hypotheses, establishing relationships, evaluating innovation, etc. First portion of the course will be devoted to reading and discussing a rather extensive core of the relevant literature. During the second portion, students are expected to present papers in which specific experimental design consideration is viewed in the context of a class of educational experiments.

#### 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, 1968.)

## UNIVERSITY ADMINISTRATION

James A. Perkins, President of the University.  
Dale R. Corson, 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.  
Lewis H. Durland, University Treasurer.  
W. Keith Kennedy, Vice Provost.  
Franklin A. Long, Vice President for Research and Advanced Studies.  
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.  
Verne N. Rockcastle, Field Representative for Education; Professor of Nature and Science Education. Ph.D., Cornell University.  
Helen L. Wardeberg, Acting Chairman, Department of Education; Professor of Elementary Education. Ph.D., University of Minnesota.  
  
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.  
Jean O. Cooper, Assistant Professor of Home Economics Education. Ph.D., Cornell University.  
Ethelwyn G. Cornelius, Instructor in Home Economics Education. M.S., Cornell University.  
Harold R. Cushman, Professor of Agricultural Education. Ph.D., Cornell University.  
Robert E. Doherty, Professor of Industrial and Labor Relations and Professor of Education. Ed.D., Columbia University.  
William E. Drake, Associate 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, Assistant 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, Associate 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.
- Lawrence B. Hixon, Professor of Education and Coordinator, Educational Placement. Ed.D., Syracuse 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, Associate Professor of Educational Research Methodology. Ph.D., University of Michigan.
- Marion Minot, Assistant Professor of Home Economics Education. Ph.D., Cornell University.
- Kenneth J. Molchen, Assistant Professor of Science Education. Ed.D., Harvard Graduate School of Education.
- 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.
- Isabel J. Peard, Professor of Education. Ph.D., Cornell University.
- Kathleen Rhodes, Professor of Home Economics Education. Ph.D., Cornell University.

#### 44 FACULTY AND STAFF

- Richard E. Ripple, Associate Professor of Educational Psychology. Ph.D., University of Wisconsin.
- Frederick H. Stutz, Professor of History of Education. Ph.D., Cornell University.
- Ronald D. Szoke, Assistant Professor of Education. Ph.D., University of Illinois.
- Frederick K. T. Tom, Professor of Agricultural Education. Ph.D., Cornell University.
- Helen L. Wardeberg, Professor of Elementary Education. Ph.D., University of Minnesota.
- Lyle L. Wicks, Instructional Materials Specialist in Agricultural Education. M.S., Cornell University.
- Akihiro Yoshida, Research Associate. Ph.D., University of Illinois.

#### SUPERVISORS IN PUBLIC SCHOOLS

- Leroy J. Holman, Supervisor of Practice Teaching in Mathematics, Ithaca Public Schools. B.S., California (Pennsylvania) State College.
- Eloise T. Hadlock, Supervisor of Practice Teaching in Science, Ithaca Public Schools. M.S., Cornell University.
- Milacent G. Ocvirk, Supervisor of Practice Teaching in English, Ithaca Public Schools. M.A., M.S., Syracuse University.
- Curtis L. Pfaff, Supervisor of Practice Teaching in Social Studies, Ithaca Public Schools. M.A., State University College at Albany.
- Will-Robert Teetor, Supervisor of Practice Teaching in Modern Languages, Ithaca Public Schools. M.A., Cornell University.

#### EMERITUS PROFESSORS

- Lynn A. Emerson, Professor of Industrial Education. Ph.D., New York University.
- Paul J. Kruse, Professor of Education (Educational Psychology). Ph.D., Columbia University.
- Claude L. Kulp, Professor of Education. M.A., Cornell 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.
- 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, Director, Division of Summer Session and Extramural Courses; Professor of Education. Ph.D., Cornell University.
- Flora M. Thurston Allen, Professor of Home Economics Education. M.A., Columbia University.
- Ethel Waring, Professor of Child Development and Family Relations. Ph.D., Columbia University.

# Index

- Admission, graduate, 14
- Agricultural Education, 6, 21
- Assistantships, 18
- Calendar, 2
- Candidate for degree only, 19
- Courses of instruction, 21-41
- Curriculum and Instruction, 6, 23
- Directed Field Experience, 17
- Doctor of Education degree, 16
- Educational administration, 7, 26
- Educational Placement, 20
- Educational Psychology and Measurement, 8, 27
- Entrance examination, 14
- Extension and Continuing Education, 9, 29
- Extramural courses, 20
- Faculty, 42
- Fees, 19
- Fellowships and scholarships, 18
- Final examination, 16, 18
- Financial aid, 18
- General education courses, 40
- General degrees, 15
- Graduate study, 14
- Guidance and Personnel Administration, 10, 31
- History, Philosophy, and Sociology of Education, 11, 34
- 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, 10
- Program of studies, 16, 17
- Provisional admission, 14
- Registration deposit, 19
- Residence, continuity of, 14
- Residence, earned extramurally, 16
- Residence, method of earning, 16, 17
- Residence requirement, 16, 17
- Residence, transfer of, 15
- Science and Nature Education, 12, 38
- Special Committee, 16, 17
- Summer Session, 20
- Teaching experience, 15
- Thesis fee, 19
- Tuition and fees, 19
- Tuition, waiver of, 19

## CORNELL UNIVERSITY ANNOUNCEMENTS

The Cornell *Announcements* are designed to give prospective students and others information about the University. The prospective student should have a copy of the *Announcement of General Information*; after consulting that, he may wish to write for one or more of the following *Announcements*:

- New York State College of Agriculture
- College of Architecture, Art, and Planning
- College of Arts and Sciences
- Department of Asian Studies
- Education
- College of Engineering
- New York State College of Home Economics
- School of Hotel Administration
- New York State School of Industrial and Labor Relations
- Center for International Studies
- Officer Education (ROTC)
- Summer Session

Undergraduate preparation in a recognized college or university is required for admission to certain Cornell divisions, for which the following *Announcements* are available:

- Graduate School: Biological Sciences
- Graduate School: Humanities
- Graduate School: Physical Sciences
- Graduate School: Social Sciences
- Law School
- Veterinary College
- Graduate School of Business and Public Administration
- Graduate School of Nutrition
- Medical College (New York City)
- Cornell University-New York Hospital School of Nursing (New York City)
- Graduate School of Medical Sciences (New York City)

Requests for the publications listed above may be addressed to  
CORNELL UNIVERSITY ANNOUNCEMENTS  
Edmund Ezra Day Hall, Ithaca, New York 14850

(The writer should include his zip code.)