

CORNELL UNIVERSITY
OFFICIAL PUBLICATION

School of Education

1950-1951

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Faculty

Cornelis Willem de Kiewiet, Ph.D., Acting President of the University and Provost.

Andrew Leon Winsor, Ph.D., Head of Department of Rural Education and Director of the School of Education.

Lucile Allen, Ed.D., Dean of Women.

Howard Andrus, M.S. in Ed., Director of Educational Placement Bureau.

Frank C. Baldwin, M.A., Dean of Men.

Jessie Bateman, M.S., Instructor in Home Economics Education.

Thomas L. Bayne, Jr., Ph.D., Associate Professor of Rural Education (Educational Psychology).

C. Kenneth Beach, Ph.D., Professor of Industrial Education.

Sara E. Blackwell, M.S., Assistant Professor, Home Economics Education.

John M. Brophy, Ph.D., Associate Professor of Industrial and Labor Relations.

Julian Edward Butterworth, Ph.D., Professor of Rural Education (Educational Administration).

Samuel J. Catalfano, M.S., Supervisor of Practice Teaching in Modern Languages, Ithaca Public Schools.

Cora E. Binzel Chase, M.S., Professor of Rural Education, Emeritus (Home Economics Education).

E. William Crane, B.S., Instructor in Rural Education.

Carolyn H. Crawford, M.S., Assistant Professor of Home Economics Education.

Robert H. Dalton, Ph.D., Professor of Child Development and Family Relationships and Head of Department.

Dora M. DePew, M.A., Supervisor of Practice Teaching in Mathematics, Ithaca Public Schools.

Theodore H. Eaton, Ph.D., Professor of Rural Education, Emeritus.

Lloyd Elliott, Ed.D., Associate Professor of Rural Education (Secondary Education).

Margaret Elliott, M.S., Instructor in Home Economics Education.

Lynn A. Emerson, Ph.D., Professor of Industrial Education.

Jean Failing, M.A., Associate Professor of Home Economics and Student Counselor.

Frank S. Freeman, Ed.D., Professor of Psychology and Education.

- Marvin D. Glock, Ph.D., Professor of Rural Education (Educational Psychology).
- Eva L. Gordon, Ph.D., Assistant Professor of Rural Education (Nature Study).
- Esther Harris, Ph.D., Assistant Professor of Child Development and Family Relationships.
- Helen Hoefer, M.S. in Ed., Associate Professor of Home Economics Education.
- Edwin R. Hoskins, Ph.D., Associate Professor of Rural Education (Agricultural Education).
- Margaret Hutchins, Ph.D., Professor of Home Economics Education.
- Riverda H. Jordan, Ph.D., Professor of Education, Emeritus.
- Loretta Klee, M.A., Director of Social Studies, Ithaca Public Schools.
- J. Paul Leagans, Ph.D., Professor of Extension Education.
- Clyde B. Moore, Ph.D., Professor of Education.
- Helen Moser, M.A., Assistant Professor of Home Economics Education.
- A. Gordon Nelson, Ph.D., Associate Professor of Educational and Vocational Guidance.
- Milacent Grimes Ocvirk, M.A., Director of English, Ithaca Public Schools.
- E. Laurence Palmer, Ph.D., Professor of Rural Education (Nature Study and Science Education).
- H. Irene Patterson, M.S., Associate Professor of Home Economics Education.
- Louis A. Preston, Instructor in Rural Education (Agricultural Education).
- William A. Smith, Ph.D., Associate Professor of Rural Education (Agricultural Education).
- Rolland M. Stewart, Ph.D., Professor of Rural Education, Emeritus.
- Frederick H. Stutz, Ph.D., Associate Professor of Education.
- Flora M. Thurston, M.A., Professor of Home Economics Education, Emeritus.
- Ethel Waring, Ph.D., Professor of Child Development and Family Relationships.
- , Assistant Professor of Agricultural Education.
- , Assistant Professor of Science Education.
- , Instructor in Agricultural Education.

ASSISTANTS, 1949-1950

- Harold R. Cushman, M.A., Assistant in Rural Education.
- Theodore Eckert, M.S., Assistant in Rural Education.
- Horatio S. Fowler, M.S., Assistant in Rural Education.
- Marjorie Garland, B.S., Assistant in Home Economics Education.
- Keith D. Holmes, M.A., Assistant in Rural Education.

Herbert Hubben, M.S., Assistant in Industrial Education.
 Frances Jensen, M.A., Assistant in Home Economics Education.
 Kingston Johns, M.A., Assistant in Teacher Training Program.
 William R. Kunsela, M.S. in Ed., Assistant in Rural Education.
 John A. B. McLeish, M.A., Assistant in Teacher Training Program.
 Harry S. Myers, B.S., Coke Oven Ammonia Research Fellowship.
 Harold L. Noakes, M.S. in Ed., Assistant in Rural Education.
 Ruth Sanderson, B.S., Assistant in Home Economics Education.
 Leona Smith, B.S., Assistant in Home Economics Education.
 John F. Wanamaker, M.S., Assistant in Rural Education.
 David Warriner, B.S., Assistant in Educational Psychology.
 Harold H. Wood, M.S. in Ed., Assistant in Rural Education.
 Sadie M. Yancey, M.Ed., Assistant in Rural Education.

COOPERATING TEACHERS IN THE ITHACA HIGH SCHOOL

Gladys I. Adams	Catherine Jones
Zelma B. Becker	Theodore Judway
Fred A. Bennett	Albert E. Lawrence
Emilie Brown	John A. Mack
Leonard Buyse	Bertha McCargo
Mayfred Claffin	Eleanor McGinnis
Josephine Conlon	Laura Merrick
Robert R. Donaldson	Jean Munoz
Marian Elliott	Martha Neighbor
Kenneth Elmore	Harry Powell
Clara S. Gage	Louise Richards
Arthur Glogau	Lilly Robinson
Dorothy Gridley	Walter Schroeder
Eloise Hadlock	Jane Stoutenberg
Eleanor Harkness	Florence Williamson
Kasimer Hippolit	Adelaide Wright
Susanne Jacobus	DeWitt Zien
Leah Johnson	

COOPERATING TEACHERS IN CENTERS OUTSIDE ITHACA

Evo Bagalini, <i>Dryden</i>	Katherine Miller, <i>Trumansburg</i>
Gllinda Beard, <i>Geneva</i>	Clarissa Smith, <i>Candor</i>
Walter DeNeef, <i>Dryden</i>	Jean Snyder, <i>Spencer</i>
Madeline Dunsmore, <i>Spencer</i>	Marjorie Swift, <i>Dryden</i>
Robert Foland, <i>Dryden</i>	Elizabeth Thurston, <i>Dryden</i>
Basil Hick, <i>Dryden</i>	Robert Wilson, <i>Groton</i>
Harold Merry, <i>Horseheads</i>	Margaret Woolley, <i>King Ferry</i>

COOPERATING ADMINISTRATORS

Russell I. Doig, *Principal, Trumansburg Central School*
William L. Gragg, *Assistant Superintendent, Ithaca Public Schools*
Claude L. Kulp, *Superintendent, Ithaca Public Schools*
Edward Long, *Principal, Dryden Central School*
William C. McFarland, *Principal, Candor Central School*
Clyde Spear, *Principal, Spencer Central School*

Organization and Functions

THE School of Education at Cornell is composed of staff members engaged in professional education work in the College of Agriculture, the College of Home Economics, the College of Arts and Sciences, and the School of Industrial and Labor Relations. Its purpose is to integrate specifically the work of teacher education in the Department of Rural Education, the Department of Home Economics Education, and the Division of Industrial Education, and the courses of professional workers in the field of education in the College of Arts and Sciences. Particular opportunity is thus provided for coordinated undergraduate and graduate work in such fields as Agricultural Education, Administration and Supervision, Curriculum Construction, Educational Psychology, Extension Education, Guidance and Personnel Management, Home Economics Education, Industrial and Technical Education, Science Education, Nature Study, and Conservation Education.

Cornell University provides more than the usual opportunities for students preparing to teach. The students in education attend classes with all other students in the University; thus they have access to the strong subject matter courses and laboratories that the various colleges have built up. They live in the dormitories and fraternities with students preparing for other professions and occupations and enjoy the social and educational stimulation that a large university provides.

TYPES OF PROFESSIONAL WORKERS SERVED

The School of Education prepares workers for many different types of positions. Its graduates find professional opportunities in rural areas as well as urban centers. It offers preparation for initial positions in teaching and professional services in secondary schools, in extension services, and in colleges. For experienced teachers and school officers of proved ability, it provides for education leading to administrative, supervisory, counseling, and other specialized services in the field of education. For teachers of superior attainment or qualification, further preparation is provided for positions in research, authorship, and administration, and for professorships in institutes and colleges.

Curricula for the several types of workers in the urban centers correspond, in general, to such curricula elsewhere. In rural education, the offerings undertake to adapt the general principles of education to the special conditions found in rural areas (defined in New York State as communities with a population of less than 4,500). In recogniz-

ing that these special conditions make adjustments in the program of preparation desirable, the fact is not overlooked that elements common to all education usually predominate in any curriculum. Among those persons given special attention as rural workers are teachers, supervisors, and directors of agriculture; principals of central, consolidated, and village schools; county, district, and village superintendents; and specialists in rural education for normal schools, teachers' colleges, universities, and state education departments. Courses for elementary teachers are given only on the graduate level. The School of Education also renders assistance to certain departments in the Colleges of Agriculture and Home Economics in the preparation of such rural workers as 4-H club leaders and county agricultural and home demonstration agents and extension workers. In brief, Rural Education at Cornell University aims to prepare various types of leaders competent to deal understandingly with those problems, both general and special, found in rural America. In all curricula, students are given opportunity to become acquainted with the educational problems and practices found in representative New York communities. Notable among these resources for effective teacher preparation is the system of central rural schools that offers, in most communities, exceptional opportunities for the education of rural people.

ADMISSION

Applications for admission should be made on forms provided by the Office of Admissions. A candidate for admission as a freshman in the undergraduate colleges must satisfactorily complete secondary school subjects carrying a value of 15 entrance units. The subjects in which these units may be offered, the number of units that may be credited in each subject, and the units required in specific subjects by the several divisions of the University, together with other general information about admission and costs at Cornell, are all described in the *General Information* booklet. This may be obtained from Cornell University Official Publication, 336 Administration Building, Ithaca, N. Y.

Admission to study in the Graduate School is granted to men and women whose personalities, experience, and records provide evidence of ability to succeed in the various fields for which the school provides preparation. Members of the faculty examine carefully the application of each individual and make recommendations to the Graduate School relative to his fitness as a candidate. Every student, whether or not he is a candidate for a degree, must be admitted by the required procedures before he registers in any course.

Because of the time required to secure and evaluate transcripts and other records, a period of two to four weeks usually elapses between the receipt of an application and formal action upon it. Every effort

will be made to render decisions promptly, and applicants can assist materially by making early applications.

VETERANS

Veterans eligible for benefits under the G.I. Bill (Public Law, 346, as amended December 28, 1945) may use those benefits for graduate or undergraduate work. Eligibility should be established well in advance of registration day. Upon presentation of a certificate of eligibility and entitlement or terminal leave order at registration time, tuition, fees, books, and supplies will be charged to the Veterans Administration, up to the maximum allowed by the law.

Veterans who have not established eligibility at the time of registration may be required to pay tuition and fees, and charges for required books and supplies. These payments will then be refunded to them when their certificates of eligibility and entitlement are filed. Representatives of the Veterans Administration at the University will help veterans who have not established their eligibility to make the necessary applications. Original discharge papers or certified copies of them, and, in the case of married veterans, legal proof of marriage, must be furnished at the time of making application.

Veterans eligible for vocational rehabilitation training under Public Law 16 should arrange in advance for the transfer of their cases to the Syracuse, New York, office of the Veterans Administration. On arrival they should report at once to the Training Officer who will advise them on further procedure.

Veterans who hold New York State War Veterans Scholarships and Canadian veterans eligible for education benefits under P.C. 5210 should present evidence of their eligibility at registration time.

All veterans who wish to use educational benefits from any of these sources must register in the University Office of Veterans Education on registration day, or as soon as possible after that date. Late registrants run some risk of receiving only partial benefits.

GUIDANCE AND SELECTION OF UNDERGRADUATES

In most cases the student will be assigned to a regular college adviser on entrance. In order that the prospective teacher may secure advice regarding his professional program, he should, as early as possible in his university experience, consult with the official adviser in his teaching field. A list of these advisers is given on page 11.

As the student proceeds in his preparation for teaching, appraisal will be made of the development of his abilities, understandings, appreciations, and of such other qualities as make for success in teaching. Special determinations will be made at two principal points as to the fitness of the candidate to continue: (1) at the end of the sophomore

year, and (2) prior to the period of student teaching in the senior year. Committees responsible for the selection in the several fields will be concerned with the personal and physical fitness of the candidate, his emotional and intellectual equipment, his general and special academic competence, his familiarity with current affairs, and his ability to use the English language.

Knowledge gained of the student by his advisers and his instructors, supplemented by the health record and the more formal measures such as psychological and personality tests, will provide information useful in judging the strictly personal factors involved. In general each student will be expected to maintain a standing in scholarship at least equal to the average of his college. Competence in this field of teaching will be tested at the close of the fourth year of residence. A steady growth in the use of English will be expected of each student. Standards of accomplishment will be set up for the several groups of prospective teachers, beginning in the freshman year, and checked at frequent intervals throughout the period of preparation. Training in the organization of materials, and in reading will be required. Opportunity to discover and remedy defects in speech will be provided.

These requirements and standards may be supplemented by additional requirements in the several fields of training in order to ensure a high degree of competence at all levels and to meet the special demands in different areas of teaching. Students entering the program later than the sophomore year will be expected to meet the standards and requirements indicated above.

Students planning to apply for admission to the undergraduate colleges should apply directly to the Director of Admissions of the University. If they expect to obtain a Bachelor of Science degree, they should apply for admission to the Colleges of Agriculture or Home Economics. If they seek a Bachelor of Arts degree, they should apply to the College of Arts and Sciences.

Students planning to teach should consult with official advisers as follows:

Academic Subjects except Science: Associate Professor Frederick Stutz,
245 Goldwin Smith

Agriculture: Professor ———, 205 Stone

Art: Associate Professor J. A. Hartell, 303 White

Home Economics: Professor Margaret Hutchins, Apt. C, Van Rensselaer

Industrial and Technical Education: Professor L. A. Emerson, School of Industrial and Labor Relations

Science: Associate Professor ———, 16 Fernow

Requirements for Advanced Degrees

ADMISSION TO THE GRADUATE SCHOOL

STUDENTS may be admitted to the Graduate School in one of the following three classes: (1) candidates for advanced degrees; (2) Resident Doctors; (3) graduate students not candidates for degrees ("non-candidates").

An application for admission should be made on the proper form, which will be supplied at the office of the Graduate School, 125 Administration Building. No application will be acted upon until all the credentials enumerated in this form 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 applications may be filed at any time, the officers cannot give assurance that the application will receive the same consideration that it would receive if filed during those periods.

An applicant who is not a graduate of Cornell University must submit complete official transcripts of all previous college studies.

To be admitted to the Graduate School, either as a noncandidate or as a candidate for a degree an applicant (1) must have received his baccalaureate degree from a college or university of recognized standing or have done work equivalent to that required for such degree; (2) as judged by his previous scholastic record, or otherwise, must show promise of ability satisfactorily to pursue advanced study and research; and (3) must have had adequate previous preparation in his chosen field of study to enter at once upon graduate study in that field.

THE SPECIAL COMMITTEE . . . The work of each candidate is in charge of a Special Committee. After the student has chosen his major and minor fields, he must select one or more members of the Faculty to represent each subject or field and to serve as the members of his Special Committee, the representative of his major subject being the chairman.

THE PROFESSIONAL DEGREES IN EDUCATION . . . Three professional degrees are offered, namely, Master of Education, Master of Science in Education, and Doctor of Education. The Master of Education degree is granted upon the completion of a program of preservice preparation for secondary school teaching; the Master of Science in Education, of a program for the preparation of specialists in education, and the Doctor of Education degree for leadership in education. The programs leading to these degrees shall include such

courses, seminars, projects, and investigations of an advanced or graduate nature as will develop ability to perform acceptably the professional duties required of the several types of educational workers.

THE MASTERS' DEGREES

1. Under the general administration of the Director, the candidate shall choose two or more members of the Graduate Faculty as a Special Committee to direct his work. The Special Committee of a candidate for the degree of Master of Education should include a representative from the student's teaching field. The Special Committee of a candidate for the degree of Master of Science in Education may include a faculty member representing a field other than Education. In each case the Chairman shall be a member of the Education staff.

2. The office of the School of Education acts as an office of record, and the candidate for a degree shall, within ten days of his registration, file in writing a statement approved by his committee showing his plan of work and course of study.

3. The maximum period allowed for the completion of all requirements shall conform to the regulations of the Graduate School.

4. Prior to scheduling the final examination, each member of the Education staff under whom the candidate has had instruction shall be informed of the proposed examination, shall be asked to express an opinion regarding the candidate's fitness for such examination, and shall be invited to be present and to take part in the examination.

THE DEGREE OF MASTER OF EDUCATION . . . This degree is granted upon the completion of a five-year program of preservice preparation for secondary school teaching. A minimum of two semesters of *advanced* work including courses, seminars, and a research problem is required. In general, the problem shall be designed to develop ability to perform the professional duties of a secondary school teacher.

There are two types of candidates for this degree: (1) Those who early in their university work make definite plans whereby preparation for teaching may be carried through the four undergraduate years and a fifth year of advanced professional study; (2) Those who wish to prepare for teaching even though they may have secured little or no professional training during their undergraduate years but have completed the requirements in subject matter fields. Such persons may normally earn the degree by following a continuous program involving one summer session and the fifth year of professional work planned to meet certification requirements.

Because of its dual purpose, the content requirement for this degree is very flexible. Under the direction of his special committee, the student's program should be organized in such a manner that he can meet certification requirements, demonstrate teaching proficiency, and indi-

cate competency in the subject matter fields in which he expects to teach before the degree is awarded. To determine professional knowledge, the School of Education will administer a comprehensive written examination to be based on such background material as educational psychology, history, and philosophy of education, and principles of teaching. This examination is independent of the final examination of the special committee and may be taken at any time prior to the final examination. A list of readings or courses covering this material will be available to the student through his committee chairman.

Under the general administration of the faculty of the School of Education, the candidate shall choose a chairman from the School of Education faculty. With the advice of the chairman, he shall then select at least a second member of his committee who may be a representative from the student's teaching field. In consultation with his committee chairman, a candidate may change the membership of his special committee with the approval of all the members of the newly constituted committee.

Not later than two weeks after his first registration in the Graduate School, a candidate must file in the office of the School of Education a statement approved by his committee showing his plan of work and course of study. At the beginning of each term he shall make out in triplicate a list of the courses which he plans to take during the term, and shall have this list approved by the chairman of his committee. Any subsequent change in this list of courses must be certified to the office of the Graduate School by the chairman of the committee.

Under the direction of his special committee, the candidate shall complete a problem acceptable to the other member or members of this committee. The completed problem should be in the committee's hands at least fifteen days before the final examination; and during the five days immediately preceding this examination, a typewritten copy, with approval slip signed by all members of the special committee, must be on file in the office of the School of Education. On the approval slip, the name of the student and the title of the problem must be identical with those inserted in the title page of the problem.

Before the degree can be conferred, two typewritten copies of the completed problem, approved by the special committee, must be deposited with the School of Education.

Prior to conducting the final examination, each member of the Education staff under whom the candidate has had instruction shall be informed of the proposed examination, shall be asked to express an opinion regarding the candidate's fitness for such examination, and shall be invited to be present at and to take part in the examination. Final examinations are conducted by the candidate's special committee, and this committee alone shall decide upon the merits of the candidate's performance.

An application for final examination, approved by the special committee, must be filed in the office of the Graduate School at least five days in advance of the examination. After all other requirements for the degree have been completed, the candidate may proceed, with the approval of his committee, to the final examination.

A report on each final examination, whether passed or failed, shall be filed by the special committee in the office of the Graduate School and in the office of the School of Education. By permission of his special committee, a candidate who has failed in a final examination may present himself for one reexamination, but only within a period of between three and six months after the failure.

Note: The attention of *experienced* teachers is directed to the opportunity that exists under Plan B of the M.A., M.S., and M.S. in Agr. degrees to secure, through a flexible program, additional preparation for secondary school teaching.

THE DEGREE OF MASTER OF SCIENCE IN EDUCATION . . .

The various programs leading to this degree are planned primarily for those who, having had experience in teaching or other type of educational work, wish to prepare themselves for such specialized forms of service as supervision, counseling, or the administration of an elementary, secondary, vocational, or technical school. For the present, teachers of industrial arts and of industrial and technical subjects and extension education should also ordinarily seek this degree.

The candidate, working under the direction of a Special Committee for a minimum of two terms, is required to complete an approved program of study adjusted to his needs. He is also required to pass a comprehensive final examination.

An approved program for this degree, in which Education shall constitute the major portion, must have unity in terms both of purpose and of sequential development.

The courses taken by the candidate should fall into three groups designated I, II, III. The determination of the groups into which particular courses fall will depend upon the professional purpose of the candidate in his graduate study and integration of courses to such purpose.

Group I. This group includes courses of a special nature and of immediate interest, such as the technical courses in English, in the languages (or a language), history, sciences (or a science), agriculture (or a division thereof), home economics, and the professional studies appropriate to the special field. It is expected that at least a third of the candidate's program will fall in this group.

Group II. This group includes* courses in the theory and science of education which will furnish the several types of background that are warranted by the nature of courses in Group I. Courses to the extent

of one-third of the total may be chosen in this group. Educational Psychology, including measurement, history and philosophy of education, and other courses necessary to integration, such as general studies appropriate to the organization and administration of schools at the several educational levels, are representative of this group.

Group III. This group includes courses intended to meet the particular needs of the candidate not adequately met in Groups I and II. In certain cases as much as a third of the candidate's program should be taken in this group.

For the selection of courses in all the above groups, the candidate should consult his special committee, whose approval is necessary.

The candidate is not required to present a formal thesis or essay; but, if he does not do so, he is expected to complete a problem to the satisfaction of his committee. It is expected that normally all work will have been taken at Cornell University. However, under exceptional circumstances, one summer of residence may be done at some other institution of comparable standards but only when this work can be shown, to the satisfaction of the Special Committee, to be an integral part of the student's entire program.

The student's Special Committee, by the middle of the third summer of study (or by the end of the first term of graduate study), shall determine the fitness of the candidate to continue his candidacy for this degree through examination or such other suitable means as the Committee may elect. The action of the Committee shall be recorded in the office of the School of Education.

OTHER MASTERS' DEGREES . . . Certain students in education may be interested in one of the following degrees: M.A., M.S., M.S. in Agr. There are two procedures by which any of these degrees may be secured, called Plan A and Plan B. Plan A is intended primarily for those candidates who, by suitably restricting their graduate work to a given field, wish to acquire some degree of competence in that field, frequently as a basis for further study and research or for professional purposes. Plan B is designed for those who wish a somewhat broader training than is permitted in Plan A.

THE DEGREE OF DOCTOR OF EDUCATION

The program for the Doctor of Education degree is designed to prepare the candidate within a broad cultural context for professional proficiency in a selected field of education. Candidates for this degree must show evidence of competency in a field of educational activity and of ability to assume a position of leadership in education. The special requirements for the degree are shown below.

RESIDENCE REQUIREMENTS . . . A candidate for this degree shall be expected to complete his residence with reasonable continuity.

All requirements, including the final examination, must be completed within four years after the minimum residence requirement has been satisfied. Two terms of residence must be consecutive, of which one may be secured under personal direction; ordinarily, these two terms should be the final terms of residence. All other requirements pertaining to residence are the same as those for the Ph.D.

SPECIAL COMMITTEES . . . Regulations pertaining to the establishment and functions of Special Committees are the same as those for the Ph.D.

MAJOR AND MINOR FIELDS. . . A candidate for the Ed.D. degree must select a major field of concentration and two minor fields of distribution properly related to and supporting the field of concentration. Fields of concentration approved for this degree are the same as the major fields listed on p. 37 for the Ph.D. Fields of distribution will be determined by consultation with the professor representing the major field.

The candidate should consult members of the Faculty regarding his choice of a major field.

SPECIAL REQUIREMENTS OF COMPETENCY . . . A candidate for the Ed.D. degree must demonstrate by examination competency in two of the following areas: (1) an approved foreign language; (2) a second foreign language; (3) statistics as applied in education; (4) law as applied in education; (5) accounting as applied in education; or (6) some other area recommended by the special committee and approved by the Dean of the Graduate School. Competency in each of these areas will be determined by examination by staff members appointed for the purpose. Preparation for these examinations must be made outside of the residence requirement and examinations must be passed within the time limits operative in the Ph.D. program.

THESIS . . . The thesis required must meet the Ph.D. requirement of scholarship and literary quality but may emphasize the critical application of knowledge to a professional problem rather than an attempt to contribute new knowledge. All regulations governing the preparation and publication of the thesis and abstracts are the same as those for the Ph.D.

EXAMINATIONS. . . A candidate for the Ed.D. degree must take a special written scholastic aptitude examination selected and administered by the School of Education in addition to the qualifying examination given by his special committee. The committee shall decide the weight to be attached to the candidate's performance on this test in evaluating his fitness for candidacy. The aptitude test shall include ability to read and interpret educational literature, ability to analyze educational problems, proficiency in written English, and other apti-

tudes considered to be indicative of appropriate ability. Rules governing the qualifying and final examinations are the same as those for the Ph.D.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Work leading to the Ph.D. degree is designed primarily to give the candidate a thoroughly comprehensive view of a field of knowledge; to train him in methods of research and scholarship in that field; and to develop qualities of leadership and a feeling of responsibility to add to the sum total of knowledge in his field. The requirements for the degree include, in addition to the requirements in foreign language: (1) six terms of residence as a graduate student, (2) the satisfactory completion, under the direction of a Special Committee, of work in one major subject and two minor subjects, (3) the presentation of an acceptable thesis, and (4) the passing of a qualifying examination and a final examination.

MAJOR AND MINOR SUBJECTS . . . A candidate for the Ph.D. must select a major subject and two minor subjects properly related to the major subject. A list of approved major and minor subjects in each of the several fields of graduate study will be found in the *Announcement of the Graduate School*. *There are no requirements in semester hours for the Ph.D. degree.*

REQUIREMENTS IN FOREIGN LANGUAGES . . . Each candidate for the Ph.D. must demonstrate his ability to read both French and German (or two languages, other than English, approved by his Special Committee), by passing in each of these languages an examination given by a member of the Language Examination Board.

A candidate for the Ph.D. is expected to meet the foreign language requirements at the beginning of his candidacy at Cornell University for that degree. A minimum of seven terms of residence is required of a candidate who does not pass at least one language examination at this time. The second language examination should be taken as soon as possible after admission to candidacy. Until it is passed, no residence credit will be allowed after four terms of credit have been earned.

Language examinations passed within one month after registration are considered as being passed at the time of registration.

Additional requirements in foreign language may be made at the discretion of the student's Special Committee.

RESIDENCE . . . For the Ph.D. a minimum of six terms of residence is required, or seven terms if the candidate does not pass one of the examinations in foreign language (see "Requirements in foreign languages") on beginning candidacy at Cornell University. Upon the recommendation of the student's Special Committee residence up to a

maximum of four terms may be credited toward the Doctor's degree for work done in other universities.

RESEARCH UNDER PERSONAL DIRECTION . . . A candidate for the Ph.D. degree who has demonstrated ability in graduate studies may, upon recommendation of his Special Committee and with the approval of the Dean, receive residence credit for research done during the summer under the personal direction of a member of the Faculty of the Graduate School. The privilege of working under Personal Direction will not ordinarily be granted to a student until he has completed at least a full year of graduate work in regular sessions. Application for the privilege must be accompanied by a statement from the member of the Faculty concerned, showing the number of weeks during which he is prepared to supervise the work of the student and the nature of the research to be done. To secure credit for such work, the student must register *in advance* at the office of the Graduate School and must also register with the Registrar and the Graduate School on the day the study begins. The supervising professor must certify to satisfactory completion of the work. A maximum of two terms may be earned in this way.

Credit toward the Ph.D. degree earned in Summer Sessions at Cornell or elsewhere is limited to two terms. A candidate who has already earned two terms of credit by work in summer sessions and who has demonstrated ability in graduate work, may, however, upon the recommendation of his Special Committee and with the approval of the General Committee, earn one more term of credit by work in Summer Sessions at Cornell with the privilege of credit for an additional term for research under Personal Direction. But the last year of residence must be in regular academic sessions and in successive terms.

THESIS REQUIREMENT . . . The thesis for the Doctor's degree must give evidence of the candidate's power to carry on independent investigation and must be satisfactory in style and composition. The thesis must be acceptable to the candidate's Special Committee in respect to both scholarship and literary quality. The completed thesis must be in the hands of the Special Committee at least fifteen days before the final examination for the Doctor's degree; and, during the five days immediately preceding this examination a typewritten copy approved by all members of the Special Committee shall be on file in the office of the Graduate School. *For further information regarding the thesis and the thesis abstract, see the Announcement of the Graduate School.*

QUALIFYING EXAMINATION . . . Each candidate for the Ph.D. must pass a qualifying examination given by his Special Committee. The examination is ordinarily given at the end of the first year of

graduate study, if that year is at Cornell. If the candidate has had one year or more of graduate work elsewhere, the qualifying examination should be given as soon as possible after his entrance into the Graduate School.

Before presenting himself for Final Examination B or C (see next paragraph), each candidate must have earned at least two terms of residence credit after the passing or the waiving of the qualifying examination.

FINAL EXAMINATION . . . Each candidate for the Ph.D. must pass a final examination, conducted by his Special Committee and covering (1) the major and minor subjects, and (2) the thesis and related topics. At the discretion of the Special Committee, the two parts of this examination may be given either separately or in combination.

When the two parts are given separately, an examination, dealing mainly with the major and minor subjects and designated as Final Examination A, may be given at the end of the fourth term of candidacy, or thereafter. Final Examination B, on the thesis and related topics and on such other work as the student may have done after completing Examination A, will be given after the residence requirement has been satisfied and the thesis has been completed and filed.

When the two parts of the final examination are given in combination, the combined examination, designated as Final Examination C, will be given after the residence requirement has been satisfied and the thesis has been completed and filed.

RESIDENT DOCTORS

Persons who hold the Doctor's degree or who have equivalent standing may, subject to permission from the Dean, be admitted to the Graduate School as Resident Doctors, for the purpose of engaging in advanced study and research in a field in which they have had adequate previous preparation. On the recommendation of the Dean, Resident Doctors are exempt from the payment of tuition and all fees except laboratory charges. Resident Doctors ordinarily are not permitted to attend classes.

GRADUATE STUDENTS NOT CANDIDATES FOR DEGREES

Students admitted to the Graduate School usually pursue a course leading to one of the advanced degrees; but a properly qualified person who, for special reasons, does not wish to meet the requirements for a degree, may be admitted to the Graduate School as a noncandidate and arrange a program of graduate study suitable to his purposes. *For further information, consult the Announcement of the Graduate School.*

WORK IN THE EXTRAMURAL DIVISION

Courses in the extramural program are available to students interested in part-time study. These include regular on-campus offerings, scheduled for the convenience of students able to commute to the campus, and off-campus courses in outlying centers located to suit the convenience of a sufficient number of students to warrant the offering. Graduate credit may be earned in these courses and is recorded in the Registrar's Office. A candidate for an advanced degree in Cornell University may have such credit applied toward requirements for the degree on recommendation of his special committee. Candidates for degrees in other institutions should be guided by the regulations in those institutions.

Residence credit toward advanced degrees in Cornell University may be earned through extramural registration as follows:

1. A candidate registered extramurally for fewer than six semester hours a term in courses given on the campus during the regular academic year may accumulate residence credit by such work, on recommendation of his Special Committee, up to a maximum of one term or three summer sessions. For such work in the amount of six or more semester hours a term, maximum residence credit will be allowed as for work done in summer sessions.

2. A candidate registered extramurally in courses given at off-campus centers authorized by the University may accumulate residence credit, on recommendation of his Special Committee, up to a maximum of two summer sessions.

3. Residence credit earned by extramural work will be recorded only in blocks of six semester hours, each such block being regarded as the equivalent of one summer session of residence credit.

Students who wish to register for these courses should apply for information to the Director of the Division of Extramural Courses, Stone Hall.

University Requirements

MALE candidates for baccalaureate degrees must fulfill the University requirements in Military Science, and all undergraduates must fulfill the requirements in Physical Training. For details see the *Announcement of the Independent Departments* and the *Announcements* of the undergraduate divisions of the University.

Fees

FOR UNDERGRADUATE STUDENTS

A STUDENT pursuing the undergraduate program will pay the tuition fee of the college in which he is matriculated as a candidate for the Bachelor's degree.

For details see the *General Information* booklet and the *Announcements* of the undergraduate divisions.

FOR GRADUATE STUDENTS

A TUITION FEE of \$150 a term is to be paid by all students registered in the Graduate School with major concentration in subjects within the state-supported colleges of the University; all others must pay a fee of \$225 a term. This fee is payable at the beginning of each term.

Certain classes of students are exempt from the payment of the tuition fee. They are:

1. Graduate students holding certain appointments as University Fellows or Graduate Scholars, and holders of certain temporary fellowships and scholarships.

2. Resident Doctors, upon the recommendation of the Dean.

3. In addition to students exempt under the charter of the University from the payment of tuition the following, to the extent herein mentioned, shall also be exempt from such payments of fees:

Upon recommendation by the appropriate college dean and by action of the Board of Trustees, for each appointment, waiver of tuition in the Graduate School, and of laboratory and shop fees in the department or line of work in which he is employed, may be made to a member of the teaching or scientific staff subject to the following limitations:

- (a) if the salary for the academic year is not greater than \$1600, the tuition fee may be waived entirely;

- (b) if the salary is greater than \$1600 but not greater than \$1700, 25% of the tuition will be charged and 75% waived;

- (c) if the salary is greater than \$1700 but not greater than \$1800, 50% of the tuition will be charged and the balance waived;

- (d) if the salary is greater than \$1800 but not greater than \$1900, 75% of the tuition will be charged and the balance waived;

(e) if the salary is greater than \$1900 no waiver will be made.

The word salary as used above means total pay, that is, base pay plus any bonus.

Graduate assistants on the nine or twelve months' basis who are located here during the summer, who are registered under Personal Direction for credit in the Graduate School, and who are required to give service in their department or college during that period, may be recommended for waiver of tuition during the Summer Session also under the above limitations. 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. The amount of tuition to which the above percentages will be applied is the prorated amount of the full tuition fee based upon the maximum amount of residence credit that can be earned.

REGISTRATION DEPOSIT . . . A deposit of \$30 must be made by every applicant for admission after the applicant has received provisional notice of acceptance, unless the candidate has previously matriculated as a student at Cornell University. Of this deposit \$18 is used to pay the matriculation fee, chest X-ray, and examination blank charge; the \$12 balance is a guaranty fund that must be maintained with the Treasurer until the student graduates or permanently withdraws.

A COLLEGE AND UNIVERSITY FEE of \$50 a term, payable at the beginning of each term, is required of all students registered in the Graduate School except Honorary Fellows and Resident Doctors. This general fee contributes toward the services supplied by the Libraries, Clinic and Infirmary, and the student union in Willard Straight Hall and pays a portion of the extra costs of laboratory courses and general administration.

A graduate student who returns to the University to present his thesis and to take the final examination for an advanced degree, all other work for that degree having been previously completed, shall register as a "candidate for degree only" and shall pay only an administration fee of \$20.

Any tuition or other fee may be changed by the Board of Trustees to take effect at any time without previous notice.

Living Facilities

IT IS the responsibility of each graduate student to arrange for his own living quarters. Graduate men students are, upon application, assigned to space, when available, within the Men's Residential Halls. Graduate women students are, upon application, assigned to space, when available, within the Graduate Women's Residential Halls. Graduate women under 21 may apply for space in undergraduate dormitories and will be assigned if space is available. Undergraduate dormitory contracts entail room, board, and an allowance for personal laundry at the regular undergraduate residence charge.

University-operated rooms for men range in price from \$5.00 to \$10.00 a week. Similar housing for women includes a weekly allowance for personal laundry in addition to room, and the price range is from \$8.50 to \$10.50 a week. Unless specifically arranged in advance, contracts cover the full college year.

Off-campus rooms range in price from \$5.00 to \$10.00 a week, the average being from \$6.00 to \$7.00. It is usually impossible to arrange for room, board, and laundry at the same place off-campus. There are, however, several restaurants and cafeterias on or near the campus which service the off-campus and University-housed student alike. The present estimated cost of board averages from \$2.00 to \$2.50 a day.

Upon assurance of admission to the University, graduate students should apply to the Office of Residential Halls, Administration Building, for specific information on both University and off-campus housing.

Graduate Fellowships, Scholarships, and Assistantships

FINANCIAL assistance to students in the various phases of the work of the School of Education is available as indicated below. These aids are granted only to students matriculated in the Graduate School, who, in addition to adequate preparation in general subjects, in an appropriate special field, and in Education, *have had a sufficient amount of successful teaching or other professional experience* to warrant seeking further preparation for educational leadership. Experience is not required of candidates for (6).

Free tuition in the Graduate School is given in addition to the cash awards, except as indicated below.

The amount and character of the service required of the holder of an assistantship varies, but additional information on this point may be secured upon request.

(1) RURAL EDUCATION

(a) One \$1600 research assistantship available to a person desiring to prepare for professional service in some field for which the Department of Rural Education offers preparation, for example, administration, agricultural education, educational psychology, elementary education, guidance, nature study and science education, philosophy of education, secondary education, supervision. A well-planned project in research must be submitted. Normally this assistantship will be granted only to a candidate for the doctorate who is within approximately one year of completing the requirements for that degree (including a reading knowledge of two foreign languages, preferably French and German).

(b) One \$1400 and one \$1000 research assistantship open to candidates for a Ph.D. degree who are available for assistance in a research project being carried on in some field for which the Department of Rural Education offers preparation.

(c) One \$1400 assistantship open to qualified candidates for a Ph.D. in Educational Psychology who are capable of assisting with the instruction in the introductory psychology courses.

(d) One \$1400 assistantship available in Agricultural Education normally only to one who is a candidate for the doctorate. It is essential that the candidate shall have had satisfactory teaching experience in vocational agriculture and, in addition, teacher training or supervisory experience in agricultural education.

(e) One \$1800 research fellowship provided by the Coke Oven Ammonia Research Bureau, Inc., for the development of more effective methods of presenting research data to students of agriculture in New York State. Available to advanced students in Agricultural Education.

(2) NATURE STUDY AND SCIENCE EDUCATION

(a) Two or three American Nature Association research fellowships of \$400 to \$600. Free tuition is not included.

(b) Two \$150 scholarships given by the late Anna Botsford Comstock and available to graduate students in nature study.

(c) One \$1000 assistantship available to a person of experience preparing for a leadership position in the teaching of science.

(3) INDUSTRIAL EDUCATION

A number of assistantships are available in this field. Persons interested should apply to Professor John W. McConnell, School of Industrial and Labor Relations.

(4) HOME ECONOMICS EDUCATION

(a) An assistantship to help with details in connection with undergraduate courses, such aid to include preparation of teaching materials, making arrangements for field trips, and assisting in classroom situations. The stipend is \$1000. Candidates having home economics teaching experience and showing promise of leadership in the field of home economics education are given preference. This is a part-time appointment requiring 15 hours of work a week. The appointee may carry 8 to 12 hours of graduate study each term.

(b) An assistantship to help with details in connection with the graduate program, such aid to include preparation of teaching materials, abstracting articles and studies to be used by graduate students, and participation in some classroom responsibilities. The stipend is \$1000. Candidates should have experience in teaching home economics and should be preparing for a position of leadership in home economics education. This is a part-time appointment and requires 15 hours a week. The appointee may carry 8 to 12 hours of graduate study each term.

(c) An assistantship to serve as adviser in one of the Home Management Apartments. Such work includes living in the apartment for two

semesters, serving as adviser to resident students, and helping with other details in connection with the Apartments or Home Economics Education. The stipend is \$1000, living quarters, and some meals. A well-rounded undergraduate background in home economics is required as well as some work toward a Master's or Doctor's degree. This is a part-time appointment requiring 20 to 30 hours a week. The appointee may carry 6 to 9 hours of graduate study each semester. Directed by Assistant Professor Carolyn H. Crawford.

(d) A research assistantship in connection with research studies in Home Economics Education. The stipend is \$1600 for the regular year. Candidates should have held a position of leadership in home economics education and should have a Master's degree. Preference will be given to candidates who have undertaken post-Master's study, who are working for a doctorate, and who have had experience in research. This is a part-time appointment requiring 20 or more hours a week. The appointee may carry 6 to 9 hours of graduate study each term. Directed by Graduate Staff. Persons interested should apply to the Secretary of the College of Home Economics, Martha Van Rensselaer Hall.

* (5) TEACHER TRAINING PROGRAM

(a) One assistantship is available which provides an income of \$1400 for the academic year.

(6) SECONDARY SCHOOL TEACHERS IN TRAINING

Free tuition scholarships are available to students in the fifth year of the five-year program who give promise of becoming outstanding secondary school teachers in any of the following fields: Agriculture, Art, English, Foreign Language, Home Economics, Mathematics, Science, Social Studies. Some of these scholarships are available to students who have received their undergraduate preparation in institutions other than Cornell.

(7) EDWARD A. SHELDON SCHOLARSHIP FOR WOMEN TEACHERS

This scholarship may be awarded "to any women of suitable qualifications who needs this assistance," preference being given candidates in the following order: first, a woman graduate of the State Teachers College at Oswego, New York; second, a woman graduate of any other New York State Teachers College; third, a suitably qualified woman who is preparing to teach. The funds available will be apportioned among qualified applicants, usually not exceeding \$250 for any one scholarship. Free tuition is not included.

The Educational Placement Bureau

THE Bureau is the central office of permanent record and placement for qualified Cornellians from *all* departments of the University who wish to secure professional positions in either secondary schools or colleges. With the Bureau's assistance Cornellians are regularly placed as teachers, guidance counselors, student personnel workers, supervisors, school administrators, and research workers. Requests are received throughout the year from public high schools, private schools, junior colleges, technical institutes, colleges, universities, and teacher-training institutions. On the college level the Bureau's contacts are nation-wide.

Services provided include a permanent file of credentials, available throughout each registrant's professional career and up-to-date information concerning current positions, salary ranges, certification requirements in each state, and placement trends and demands. Detailed information pertaining to all accredited colleges, universities, junior colleges, and private schools in the country is available for reference.

All Cornellians qualified and interested in school or college positions are invited to register with this office well in advance of the completion of their training. 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 National Institutional Teacher Placement Association. With the cooperation of the registrant, this record is kept up to date at all times and is available to any educational institution or qualified official upon request. Heads of departments and professors are invited to use this service in placing their graduates.

The Bureau is located in Room 102, Stone Hall.

The Bureau of Educational Research and Service

THE Bureau is designed to provide equipment and an organization whereby the various resources in the University can be utilized in the study of educational problems. These problems may arise in such areas as curriculum planning, testing and evaluation, administration and supervision, personnel management, youth adjustment, counseling, and psychological foundations of education. They may exist in any of the various colleges of the University, in the public schools, or in the communities of the state. In addition to the coordination of research, the Bureau offers statistical and clerical assistance to the staff and graduate students in their independent research studies.

In cooperation with the University Testing Service, the Bureau maintains an educational and vocational testing and guidance service for students referred by Counselors of the Colleges, the Dean of Men, and the Dean of Women. Persons not enrolled at Cornell University may obtain such service upon application to the Bureau and the payment of a fee.

Other forms of service include the maintenance of information concerning schools and colleges and related matters, teaching aids for use by the staff in the preparation of teachers, an extensive library of psychological and educational tests, and a small selected library of technical books and films dealing with research in education and psychology. There are numerous opportunities for graduate students in education to obtain practical experience in the various activities of the Bureau as part of their programs of study. Arrangements for such experience are made through the Director of the Bureau and the student's advisory committee.

Programs of remedial reading are conducted on an individual or group basis for students within the University found to be in need of such training who request this service through their advisers.

Effort is made to offer educational service in harmony with recognized needs and developments. For that purpose suggestions as to improvement of the Bureau's program are constantly solicited.

Undergraduate Programs of Professional Preparation

THE requirements for teaching certificates vary considerably throughout the country. A student preparing to teach should not assume that the completion of the requirements for a degree at Cornell, including courses in education, automatically qualifies him for a teaching certificate in the locality in which he plans to teach. Special requirements of the state or city in which the student expects to teach should be a guide in planning a teacher training program. Questions concerning these requirements should be referred to the student's adviser in education.

Observation and directed teaching are conducted in selected schools of Ithaca and of near-by communities. Apprentice teaching also will be done in off-campus schools, selected primarily to provide better than average opportunity for experience and growth. Students engaged in apprentice teaching will live in the school community during the period of this experience and will be expected to participate in community life.

TEACHERS OF AGRICULTURE

GRADUATION REQUIREMENTS OF THE COLLEGE OF AGRICULTURE . . . Students preparing to teach in the field of vocational agriculture will register in the New York State College of Agriculture and must meet the requirements of that College for graduation. The College of Agriculture requires the completion of the following program of courses; orientation, 1 hour; English, 6 hours; botany, biology or zoology, 6 hours; chemistry or physics, 6 hours; geology, 3 hours; basic sciences and social studies, 24 hours; electives in the College of Agriculture, 54 hours; general electives, 20 hours.

TECHNICAL STUDIES IN AGRICULTURE AND RELATED SCIENCES . . . In the present plan for the preparation of prospective teachers through the New York State College of Agriculture, a total of 54 semester hours in agriculture and related science is required. A minimum of 36 of these hours should be distributed in the following broad fields:

Semester hours
Minimum

Agricultural economics and farm management.....	6
Agricultural engineering and farm mechanics.....	6
Farm animals including dairy and poultry.....	6
Farm crops chosen from field, vegetable, and fruit crops....	6
Soil technology	3
Dairy science	3

GENERAL ELECTIVES . . . The prospective teacher will find opportunity to select such courses from agriculture, science, or other University offerings as will contribute further to his preparation for teaching.

TEACHERS OF ACADEMIC SUBJECTS

GRADUATION REQUIREMENTS OF THE COLLEGE OF ARTS AND SCIENCES . . . At Cornell University all prospective teachers of academic subjects, except students in the College of Agriculture preparing to teach science, will register in the College of Arts and Sciences and must meet the graduation requirements of that college. For full information consult the *Announcement of the College of Arts and Sciences*.

PREPARATION IN THE TEACHING FIELD . . . The student must select, before the end of the second year of residence, a major field of study. The specific requirements vary somewhat according to the field. For full information consult the *Announcement of the College of Arts and Sciences*.

As an aid to the prospective teacher, programs in the academic subjects have been established for the four undergraduate years which meet college requirements and provide the preparation needed for teaching in the secondary schools. These programs vary in extent and in the number of prescribed courses. It is desirable that some one of the programs below be selected, although other combinations may be arranged to suit individual needs.

English and Speech. In the sophomore year the student takes the course in Great English Writers (English 251-252) and a course in Composition (English 201 or 203). In the junior year he takes the survey course in American Literature (English 329-330), and in the senior year the course in Shakespeare (English 369-370). In addition to these requirements the following courses are recommended for prospective teachers: one course in Criticism (which may be Literature 401-402), the course in American Folk-Literature (English 355), and a course in Modern Poetry (English 326 or 349). The requirement for this special English major is thirty hours after English 111-112 has been completed. Nine hours of Speech must be included in the related subjects, preferably Speech and Drama 101, 111 or 141, and 333. Students primarily interested in Speech and Drama should major in that department and supplement their training with considerable work in English.

Latin. Students desiring to prepare themselves to teach Latin in the secondary schools should fulfill the requirements of the major in Classics. A combination may be made between Latin and another field of study which will satisfy the major requirements and prepare prospective teachers, in both subjects.

Modern foreign languages. Students desiring to prepare themselves to teach the modern foreign languages in secondary schools should study carefully the offerings by the Division of Modern Languages and the several departments of literature. Majors are offered, with emphasis as desired by the student either in literature or linguistics, in French, German, Russian, and Spanish. For detailed descriptions of work involved for the completion of the majors in these fields, see the departments of German Literature, Romance Literature, Russian Literature, and the Division of Modern Languages in the *Announcement of the College of Arts and Sciences*.

Mathematics. Preparation for teaching mathematics is based on the major requirement in the subject: 9 hours of analytic geometry and calculus plus 15 hours of advanced courses. Course 241-242 should be taken by all prospective teachers. As the teaching of mathematics is frequently combined with the teaching of physical science or general science, it is recommended that considerable work be taken in the sciences.

Science. Teachers of science may be prepared either through the College of Agriculture or through the College of Arts and Sciences. In the College of Agriculture the training includes 36 hours of basic courses in physical, biological, and earth sciences, and approximately 24 hours of advanced courses in one of these areas. The program in the College of Arts and Sciences is based on approximately 20 to 40 hours in a major field, ordinarily chosen from botany, chemistry, physics, or zoology, and additional courses to make a total of approximately 60 hours in science. In addition, completion of the minimum certification requirement of 15 hours in mathematics is advisable.

Social Studies. In social studies the student may major in history, economics, government, or sociology, although concentration in history is preferable. The basic program must include 18 hours of history and 18 hours of social science. Depending upon the major subject selected, the number of hours in the program will aggregate from 48 to 60.

During the fifth year, the prospective teacher of an academic subject may select, under the guidance of his Special Committee, from 15 to 20 hours of advanced courses and seminars in his teaching field.

TEACHERS OF HOMEMAKING

TEACHERS IN PUBLIC SCHOOLS . . .

Graduation requirements of the College of Home Economics. Students preparing to teach Home Economics in the public schools will register in the New York State College of Home Economics and must meet the requirements of that College for graduation. In brief, the College requires the completion of 30 hours of basic sciences of which 6 are to be in the biological sciences, 6 in the physical sciences, 12 in the social sciences, and 6 additional hours to be distributed among the three groups; 6 hours of English; 40 hours of home economics to include the "homemaking core"; 44 hours of electives, of which 24 hours may be in any College of the University, and of which 20 hours

must be in courses offered in the State Colleges of Home Economics, Agriculture, School of Industrial and Labor Relations, and Veterinary Medicine. Detailed information may be secured from the *Announcement of the College of Home Economics*.

Subject-matter requirements of the State Education Department for Certification. In the majority of school systems instructors in home economics teach all phases of homemaking. Even in those schools in which homemaking is departmentalized it is desirable that each teacher have a broad view of the entire field. To help achieve this, the following subject matter is required by the State Education Department.

Credit hours

Family Relationships and Child Study.....	8-12
Part of the work in family relationships may be covered through sociology courses in The Family. Part is taken in home economics. Child study may include work in child psychology, and should also include observation of child behavior and guidance in a nursery school, and some participation in work with children through a nursery school, play group, or in homes.	
Health in the Home and Community and Home Nursing.....	2- 4
This includes study of home and community hygiene, first aid, and emergencies in the care of the sick at home.	
Household Management and Economics of the Household.....	8-12
Study in this field is concerned with management and economic principles as they apply in the home. Consideration should be given to the management of the house with relation to family living. Some experience in practical problems should be included. It is also desirable to develop that phase of managerial ability involved in the interrelationships in the home and the community.	
Nutrition and Food Preparation.....	10-14
This should include nutrition for all ages and, in the main, for the healthy person. It includes the science of food preparation, food buying, storage, kitchen planning, family meals, and the food budget.	
Art and Home Furnishing.....	8-10
This may include courses in applied art, or art principles, or design and color, or other types of courses which include fundamental principles of art, or various kinds of courses in applied art such as home crafts. The work in furnishing and house planning should emphasize furnishing in relation to family living.	
Clothing and related subjects (design, textiles, construction).....	10-16
This includes an understanding of the essentials of personal grooming, care of clothing, the personal wardrobe, clothing for the family, the clothing budget, the construction of clothing, and the design of costumes. The textiles study should include textiles used in clothing and home furnishings.	

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Suggested Experiences. In addition to the above requirements, a student preparing to teach Home Economics should plan her college program and her experiences during the summers so as to build an

understanding of herself, of children, and of adults. She should be able to recognize in homes and communities the significant situations and problems to which home economics applies, to use home economics to achieve sound practices in her own living, and to give evidence of a growing skill in helping others to interpret and apply its findings and standards to the solution of individual, home, and community problems.

EXTENSION WORKERS . . .

Graduation requirements of the College of Home Economics. See the requirements for teachers of Home Economics, above.

Subject-matter recommendations in addition to graduation requirements. It is recommended that students preparing for extension work have general training in homemaking and courses in sociology, psychology, economics, and education.

To assist the students in meeting these recommendations, a suggested plan is set up for the use of students and their counselors. This plan provides for courses as indicated to meet graduation requirements, recommended courses of special interest for extension workers, and elective courses which will further contribute to the student's preparation for extension service.

Suggested Experience. A student preparing to do extension work should plan her college program and her experiences during the summer to provide opportunity to work with individuals and groups, to observe and study communities and the significant situations and problems to which home economics applies. Summer experience in the extension service program is recommended whenever possible. Opportunities for volunteer work can be provided between freshman-sophomore, sophomore-junior years by the Extension Service. Summer assistant positions with compensation are provided between junior and senior year.

Practice in public speaking, radio, newspaper writing, and discussion with a variety of groups and organizations will be valuable.

TEACHERS OF TECHNICAL AND RELATED TECHNICAL SUBJECTS

The permanent state certificate for teachers of technical subjects in industrial and technical high schools requires one full year of study in addition to undergraduate work of a technological nature, supplemented by three years of practical experience in the technical field for which the certificate is desired.

To meet the needs of this group, Cornell University has provided programs of study leading to the degree of Master of Science in Edu-

cation. Teachers in technical institutes will also be served by these programs with an opportunity to concentrate their work in the technical institute field. No fixed curricula are prescribed. The program for each student is worked out with his special committee, the subjects required being selected upon the basis of the student's needs. The student's program includes general and special courses in education and may include courses in basic sciences, engineering or other technical fields, economics, industrial and labor relations, personnel administration, guidance, and the like. This work is offered during the regular academic year and in the Summer Session.

Attention is directed also to the various technical offerings in special fields of engineering for technical teachers who may wish to supplement their technological background (See the *Announcement of the College of Engineering*).

TEACHERS OF INDUSTRIAL ARTS . . . The permanent state certificate for teachers of industrial arts requires thirty hours of advanced professional study. Cornell offers opportunities for industrial arts teachers to do graduate work in the broad field of industrial education, including industrial arts education. This program leads to the degree of Master of Science in Education. Graduate work in the field of industrial education provides opportunity for persons with industrial arts preparation to expand their background and opportunities.

The program for each student is worked out with his special committee, keeping in mind individual needs. Some industrial arts teachers have found it desirable to take work in secondary school administration, industrial and labor relations, guidance, personnel administration, and other fields.

TEACHERS OF TRADE SHOP SUBJECTS . . . Although the Industrial and Technical Education program at Cornell is designed primarily for graduate study, teachers of trade shop subjects will find value in many of the courses open to both graduate and undergraduate students. Cornell does not offer a B.S. degree in Industrial Education; however, shop teachers working toward the Bachelor's degree may take courses in residence, Summer Session, or by extension and have them applied toward the degree at another institution or toward permanent state certification.

TRAINING DEPARTMENTS IN INDUSTRY . . . The transfer of the work offered in industrial education at Cornell to the School of Industrial and Labor Relations has made possible expanded offerings for the preparation of persons for employment in training departments in industry. Undergraduate and graduate students with comprehensive background in the field of industrial and labor relations may elect courses specially designed for such preparation, together with other

courses in education which are basic to all types of educational programs. Graduate students may take a major or minor in this field.

TEACHERS OF ART

The School of Education cooperates with the College of Architecture in the preparation of teachers of Art. Students desiring to prepare in this field should register in the College of Architecture as candidates for the degree of Bachelor of Fine Arts. See the *Announcement of the College of Architecture* for the curriculum.

The technical work in Art, History of Art, and related subjects, required of such students, is the equivalent of more than three full years of work, with the remainder of the time being spent on general education and professional education.

The technical work in art is given by members of the staff of the Department of Painting and Sculpture, who are all practicing artists. It affords a training in the fundamentals of design, drawing, and painting, which aims to equip the student as a competent practitioner of his art, as well as a teacher.

Graduate Programs of Professional Preparation

FIELDS OF STUDY FOR GRADUATE STUDENTS

TO meet the requirements of the Graduate School candidates for advanced degrees must select a major or minor field of work or a field of concentration. Approved fields for majors in the School of Education are as follows:

Administration
Agricultural Education
Curriculum
Educational Psychology
Educational and Mental Measurement¹
Extension Education
Guidance and Personnel Administration
History of Education¹
Home Economics Education
Industrial Education

Nature Study — Science Education —
Conservation Education
Rural Education
Secondary Education
Science Education
Social Studies Education
Supervision (*see* Administration)
Theory and Philosophy of Education
Vocational Education

A student may select as a minor any of the above major fields or one of the following: Education, Educational Method.

In general, candidates for higher degrees in Education are encouraged to take one minor outside the field of Education.

The courses recommended in each of these areas, together with a discussion of professional opportunities and requirements, are presented here for the guidance of the student.

ADMINISTRATION AND SUPERVISION . . . As indicative of increasing standards that are becoming effective in this field in many states, New York requires for permanent certification thirty hours of graduate work. In the lists given below may be found courses that enable a person with appropriate undergraduate training to prepare as: city superintendent, county superintendent, district superintendent, supervising principal, elementary school supervisor, or secondary school supervisor. Basic courses are 260 (or 262 or 263), 261, 243 and 276.

¹For a Master's degree only.

Principal Courses in Education:

- ILR. 132. Administration of Industrial Education
- R.E. 243. Procedures and Techniques in Supervision
- R.E. 245. Seminar for Principals
- R.E. 246. The Supervision of the Elementary School
- R.E. 260. The Twelve-Grade Principalship
- R.E. 261. Fundamentals of Educational Organization and Administration
- R.E. 262. The Secondary School Principalship
- R.E. 263. The Principalship of the Elementary School
- R.E. 264. Financial Policies and Practices in Public Schools
- R.E. 265. The School Plant
- R.E. 267. The Legal Problems of the School Administrator
- R.E. 268. Seminar in Rural School Administration
- R.E. 276. Principles of Curriculum Building
- R.E. 277. Seminar in Curriculum
- R.E. 278. Seminar in Rural Secondary Education
- R.E. 298. Seminar in Rural Educational Leadership
- R.E. 300. Special Studies
- R.E. 400. Internship in Education
- R.E. 401. Problems in Higher Education
- H.E. Ed. 481. Seminar in Supervision in Home Economics Education

Related Courses in Education:

- R.E. 244. Philosophy of Education
- R.E. 247. Seminar in Elementary Education
- R.E. 251. Educational Measurement
- R.E. 253. Introduction to Educational Statistics
- R.E. 282. Educational and Vocational Guidance
- R.E. 290. Rural Secondary Education
- R.E. 295. Comparative Education
- R.E. 299. Research Methods and Techniques in Education
- Psych. 618. Individual Differences
- Psych. 675. Seminar in Human Development and Behavior

Related Courses in Other Fields:²

- | | |
|-----------------------------------|-----------------------------|
| Local Government | Seminar in Public Finance |
| Taxation | Money, Currency, and Credit |
| Land Economics | Accounting |
| Problems in Public Administration | Trade Fluctuations |
| Labor Conditions and Problems | Rural Sociology |
| Economic Policy | Social Pathology |
| Public Administration | Population Problems |
| Social Services to Individuals | Social Anthropology |
| Rural Leadership | Criminology |
| The Rural Community | |

²For all related courses in this section, see the *Announcement of the Graduate School*.

AGRICULTURAL EDUCATION . . . Under the National Vocational Education Acts, the State Education Department of New York has made provision for the preparation of leaders in the several phases of agricultural education, other divisions of vocational education cooperating. In the several states specific qualifications for teachers, for supervisors and directors, and for teacher-trainers in designated institutions have been set up. These qualifications define the acceptable standards pertaining to practical working experience, technical education, professional education, teaching experience in approved vocational schools, supervisory or administrative experience.

In addition to the preparation of leaders, as indicated above, administrators and supervisors, responsible for the general supervision of vocational agriculture (together with other vocational personnel), are becoming concerned about the necessary preparation for professional leadership. This interest has developed also among leaders in the related fields of agricultural extension, vocational guidance and counseling, special agricultural services here and abroad, and in other agricultural programs among private and public agencies. The courses listed below represent those required or elected most frequently in connection with graduate work in agricultural education.

Principal Courses in Education:

- R.E. 194. Principles of Vocational Education
- R.E. 199. Informal Study in Education
- R.E. 230. Seminar in Agricultural Education
- R.E. 231. The Supervision of Vocational Agriculture in the Secondary School
- R.E. 232. Evaluation and Program Planning in Agricultural Education
- R.E. 233. Supervised Farming Programs in Vocational Agriculture
- R.E. 234. Education for Leadership of Farm Youth and Adult Groups
- R.E. 235. The Preparation of Teachers in Vocational Agriculture
- R.E. 236. The Organization and Administration of Vocational Agriculture in the Public Schools
- R.E. 237. Courses of Study in Vocational Agriculture
- R.E. 238. Materials of Instruction in Vocational Agriculture
- R.E. 239. Methods and Materials of Instruction for Prevocational Agriculture
- R.E. 300. Special Studies
- R.E. 400. Internship in Education
- R.E. 401. Problems in Higher Education

Related Courses in Education:

- R.E. 211. Educational Psychology
- R.E. 218. Seminar in Educational Psychology

- R.E. 223. Seminar in Extension Teaching
- R.E. 224. Program Planning in Extension Education
- R.E. 243. Procedures and Techniques in Supervision
- R.E. 251. Educational Measurement
- R.E. 253. Introduction to Educational Statistics
- R.E. 261. Fundamentals of Educational Organization and Administration
- R.E. 262. The Secondary School Principalship
- R.E. 276. Principles of Curriculum Building
- R.E. 277. Seminar in Curriculum
- R.E. 282. Educational and Vocational Guidance
- R.E. 283. Counseling Methods
- R.E. 290. Rural Secondary Education
- Ed. 296. History of American Education
- Ed. 297. History of Education in the Modern Period
- R.E. 299. Seminar: Educational Research Procedures and Techniques

*Courses in Technical Fields:*³

Graduate students majoring in Agricultural Education elect minors in many different fields. Agricultural Economics, Agricultural Engineering, Agronomy, Animal Husbandry, Bacteriology, Dairy Industry, Ornamental Horticulture, Plant Breeding, Pomology, Poultry, Rural Sociology, and Vegetable Crops constitute the principal fields of such minors. Frequently also students majoring in these fields elect minors in Agricultural Education. Students are advised to address these departments for information.

CURRICULUM AND METHODS . . . The offerings in curriculum and methods are designed for those who expect to become curriculum directors, supervisors, critic teachers, or administrators in elementary and secondary schools, community colleges, or institutions of higher learning. Particular attention is given to the theories underlying curriculum construction and methods of teaching.

Principal Courses in Education:

- R.E. 107. The Teaching of Nature Study and Elementary School Science
- R.E. 128. Methods of Teaching Science in Secondary Schools
- Ed. 130. The Art of Teaching
- R.E. 207. Methods and Materials for the Teaching of Science in Secondary Schools
- R.E. 223. Seminar in Extension Education
- R.E. 224. Program Planning in Extension Education
- R.E. 237. Agricultural Curriculum and Courses of Study

³See the *Announcement of the College of Agriculture*.

- R.E. 243. Procedures and Techniques in Supervision
- R.E. 246. The Supervision of the Elementary School
- R.E. 276. Principles of Curriculum Building
- R.E. 277. Seminar in Curriculum
- R.E. 284. The Teaching of Occupations and Orientation Classes
- R.E. 285. Occupational and Educational Information
- ILR 83. Curriculum Construction in Industrial and Technical Education
- H.E. Ed. 439. The Teaching of Home Economics
- H.E. Ed. 449. Curriculum Planning in Home Economics

Related Courses in Education:

- R.E. 129. Practice in Teaching Science in Secondary Schools
- R.E. 111. Educational Psychology
- R.E. 117. Psychology of Childhood and Adolescence
- R.E. 194. Principles of Vocational Education
- R.E. 228. Seminar in Child Guidance
- R.E. 232. Evaluation and Program Planning in Agricultural Education
- R.E. 233. Supervised Farming Programs in Vocational Agriculture
- R.E. 234. Education for Leadership of Farm Youth and Adult Groups
- R.E. 241. The Preparation of Teachers for Normal Schools and Colleges
- R.E. 247. Seminar in Elementary Education
- R.E. 254. Statistical Instruments in Education
- R.E. 255. Use and Interpretation of Tests in Guidance and Personnel Administration
- R.E. 278. Seminar in Rural Secondary Education
- R.E. 290. Rural Secondary Education
- R.E. 293. Adult Education
- R.E. 400. Internship in Education
- R.E. 401. Problems in Higher Education
- Psych. 618. Individual Differences
- H.E. Ed. 437. Adult Education
- H.E. Ed. 449. Evaluation
- H.E. Ed. 480. Seminar in Home Economics Education
- H.E. Ed. 481. Seminar in supervision in Home Economics

Related Courses in Other Fields:

- | | |
|--|--|
| Shop Work for Rural High School Teachers | Social Services to Individuals |
| Laboratory Methods in Biology | Rural Leadership |
| Extension Information Methods | Attitude and Public Opinion Analysis |
| Problems in Rural Community Organization | Marketing in Vocational Agricultural Education |

EDUCATIONAL PSYCHOLOGY . . . The courses in educational psychology are intended to meet the needs of two general groups of students: (1) those who specialize in educational psychology, such as school psychologists and college teachers of educational psychology, and (2) those counselors, teachers, administrators, supervisors, social workers, students of family life, and others who wish to supplement their preparation with selected psychological courses.

Principal Courses in Education:

- R.E. 10. Psychology
- R.E. 111. Educational Psychology
- R.E. 112. Educational Psychology
- R.E. 117. Psychology of Childhood and Adolescence
- R.E. 211. Educational Psychology
- R.E. 213. Psychology of Learning in the School Subjects
- R.E. 218. Seminar in Educational Psychology
- R.E. 219. Seminar in Personnel Administration
- R.E. 223. Seminar in Extension Teaching
- R.E. 224. Program Planning in Extension Education
- R.E. 228. Seminar in Child Guidance
- R.E. 251. Educational Measurement
- R.E. 253. Introduction to Educational Statistics
- R.E. 254. Statistical Instruments in Education
- R.E. 255. Use and Interpretation of Tests in Guidance and Personnel Administration
- R.E. 282. Educational and Vocational Guidance
- R.E. 283. Counseling Methods
- Psych. 601. Educational Psychology
- Psych. 607. Psychological Tests I
- Psych. 608. Psychological Tests II
- Psych. 618. Individual Differences
- Psych. 675. Seminar in Human Development and Behavior
- Psych. 680. Procedures in Clinical Child Guidance
- Interdepartmental. 201-202. Human Growth and Development
- C.D. & F.R. 475. Family Life Education

*Related Courses in Other Fields:*⁴

- | | |
|--|-------------------------------|
| Social Psychology | Clinical Psychology |
| Culture and Personality | Psychobiology |
| Social Anthropology | Industrial Psychology |
| Memory and Thinking | Work, Fatigue and Efficiency |
| Physiological Psychology of the Senses | Heredity and Eugenics |
| Contemporary Psychology | Comparative Neurology |
| The Normal and the Abnormal | The Individual and the Family |

⁴See the announcements of the Colleges of Arts and Sciences, Agriculture, and Home Economics, under Psychology, Zoology, Sociology, Plant Breeding, and Child Development and Family Relationships.

Experience with Children	Participation in Nursery School
Creative Play in Childhood	Seminar in Child Guidance
Literature for Children	The Home and Family Life
Principles for Child Guidance	Research in Child Development and
Child Development	Family Relationships
Family Relationships and Personality	Seminar in the Family
Development	Delinquency and Crime
Methods of Child Study	Genetics
Marriage	The Field of Social Work
Exceptional Children in the Family	Statistics

EDUCATIONAL AND MENTAL MEASUREMENT . . . The teacher, supervisor, guidance and personnel worker, and administrator all have frequent occasion to use measurements of various kinds. The data secured through the use of instruments of measurement must be systematically arranged, interpreted statistically, and often presented in graphical form for better understanding by boards and by the public. The offerings in this field are planned to meet the needs of such students. The school psychologist, the guidance and personnel worker, and the research worker need more training in this field than does the teacher.

Principal Courses in Education:

- R.E. 251. Educational Measurement
- R.E. 253. Introduction to Educational Statistics
- R.E. 254. Statistical Instruments in Education
- R.E. 255. Use and Interpretation of Tests in Guidance and Personnel Administration
- R.E. 300. Special Studies
- Psych. 607. Psychological Tests I
- Psych. 608. Psychological Tests II
- H.E. Ed. 459. Evaluation in Home Economics Education

Related Courses in Other Fields:

The following courses in Mathematics are not required but they are advised for the student who specializes in the statistical aspects of measurement: Mathematics for Students of Economics and Statistics, Statistics.

EXTENSION EDUCATION . . . Many workers in Cooperative Extension Work in Agriculture and Home Economics have through the years supplemented their technical training with some courses in Education and related fields. The need for broader and more extended training of workers in extension education has come to be widely recognized. In recognition of this need, a program for graduate studies is now available for students of experience in this field.

Because of the varied educational backgrounds of workers in this field, much flexibility is permitted in individual programs arranged in personal counseling with each student.

Principal Courses in Education:

- R.E. 219. Seminar in Personnel Administration
- R.E. 223. Seminar in Extension Education
- R.E. 224. Program Building in Extension Education
- R.E. 225. Teaching in Extension Education
- R.E. 243. Procedures and Techniques in Supervision
- R.E. 244. Philosophy of Education
- R.E. 276. Principles of Curriculum Building
- Ed. 296. History of American Education
- Ed. 297. History of Education in the Modern Period
- R.E. 298. Seminar in Rural Educational Leadership
- R.E. 299. Seminar: Educational Research Procedures and Techniques
- H.E. Ed. 437. Adult Education
- H.E. Ed. 439. The Teaching of Home Economics
- H.E. Ed. 459. Evaluation
- H.E. Ed. 480. Seminar in Home Economics Education

Principal Courses in Psychology:

- Psych. 301. Contemporary Psychology
- Psych. 618. Individual Differences
- Psych. 675. Seminar in Human Development and Behavior
 - R.E. 117. Psychology of Childhood and Adolescence
 - R.E. 211. Educational Psychology
 - R.E. 218. Seminar in Educational Psychology
 - R.E. 255. Use and Interpretation of Tests in Guidance and Personnel Administration
- S.A. 301-302. Social Psychology
- S.A. 375. Seminar in Social Psychology

Related Courses in Other Fields:

- R.S. 111. Rural Community Organization
- R.S. 132. Rural Leadership
- R.S. 203. Organization Methods
- R.S. 208. Systematic Sociology
- R.S. 211. The Rural Community
- R.S. 212. Rural Sociology
- R.S. 218. Seminar: Applications of Sociology to Problems of Rural Society
- R.S. 219. Seminar in Community Organization
- Ag.Ec. 138. Taxation
- Ag.Ec. 160. Food Economics
- Ag.Ec. 181. Land Economics
- Ag.Ec. 251. Public Problems in Agriculture
- H.E. 260. Problems in Providing Consumer Goods

- H.E. 410. Economic Problems of Families
- H.E. 430. Economic Conditions in Relation to the Welfare of Families
- R.E. 228. Seminar in Child Guidance
- Ext. Teach. 140. Extension Organization, Administration, and Policy
- S.A. 210. The Family
- S.A. 431-432. Structure and Functioning of American Society
- S.A. 601. Social Anthropology
- S.A. 602. Culture and Personality
- Eng. 389. Advanced Exposition

GUIDANCE AND PERSONNEL WORK . . . The demand for mature, well-trained workers in guidance and personnel service has increased in recent years, and is at present accentuated by problems of postwar readjustment. To meet this need for more competent counselors and personnel administrators in high schools and colleges, business and industrial organizations, government bureaus, and philanthropic and social agencies, the School of Education and other divisions of the University offer a large number of courses as well as a variety of opportunities for supervised experience.

A given student's program of study is planned in consultation with his special committee and in the light of his previous preparation, degree requirements, certification needs, and vocational goal. Students who wish to meet the New York State requirements for guidance service in the public schools must take, for the Provisional Certificate, the courses listed below that are marked with a single asterisk (*). For the Permanent Certificate, the courses marked with a double asterisk (**) must also be taken. *For a full description of the opportunities and types of training available in guidance and personnel service, the prospective student should write to the School of Education to request a leaflet entitled "Programs of Training for Counselors."*

Principal Courses in Education:

- R.E. 117. Psychology of Childhood and Adolescence
- R.E. 211. Educational Psychology
- R.E. 219. Seminar in Personnel Administration
- R.E. 251. Educational Measurement
- **R.E. 255. Use and Interpretation of Tests in Guidance and Personnel Administration
- Ed. 280. Student Personnel Administration
- Ed. 281. Seminar in Student Personnel Administration
- *R.E. 282. Educational and Vocational Guidance
- *R.E. 283. Counseling Methods
- **R.E. 284. The Teaching of Occupations and Orientation Classes
- **R.E. 285. Occupational and Educational Information

- R.E. 289. Supervised Practice in Testing and Counseling
 **Psych. 607. Psychological Tests I
 Psych. 618. Individual Differences
 Psych. 680. Procedures in Clinical Child Guidance

Related Courses in Education:

- ILR. 80. Development and Organization of Industrial Education
 R.E. 190. Social Foundations of Education
 R.E. 194. Principles of Vocational Education
 R.E. 243. Procedures and Techniques in Supervision
 R.E. 244. Philosophy of Education
 R.E. 261. Fundamentals of Educational Organization and Administration
 R.E. 276. Principles of Curriculum Building
 R.E. 277. Seminar in Curriculum
 Ed. 296. History of American Education
 Ed. 297. History of Education in the Modern Period
 R.E. 299. Seminar: Educational Research Procedures and Techniques
 R.E. 400. Internship in Education
 R.E. 401. Problems in Higher Education

Related Courses in Other Fields:

- | | |
|--|---|
| **Labor Conditions and Problems | Job Analysis — Methods and Applications |
| Trade Unionism and Collective Bargaining | The Normal and the Abnormal |
| **Intermediate Economic Theory | Clinical Psychology |
| Dynamics of Personality | Industrial Psychology |
| Introduction to Industrial and Labor Relations | Work, Fatigue and Efficiency |
| Human Relations in Industry | **The Field of Social Work |
| Personnel Management | Social Services to Individuals |
| Statistical Reasoning | Systematic Sociology |
| Family Life Education | **Mental Hygiene |

HISTORY OF EDUCATION . . . Graduate study in the history of education is offered for those students who wish to prepare to teach this subject or who wish to supplement their professional programs in education and other fields.

Principal Courses in Education:

- R.E. 190. Social Foundation of Education
 R.E. 244. Philosophy of Education
 Ed. 292. Seminar in Social Studies Education
 R.E. 295. Comparative Education
 Ed. 296. History of American Education
 Ed. 297. History of Education in the Modern Period
 Ed. 500. Special Studies
 C.D. & F.R. 475. Family Life Education

Related Courses in Education:

- R.E. 194. Principles of Vocational Education
- R.E. 209. The Development of Nature and Science Education in the United States
- R.E. 211. Educational Psychology
- R.E. 241. The Preparation of Teachers for Normal Schools and Colleges
- R.E. 243. Procedures and Techniques in Supervision
- R.E. 261. Fundamentals of Educational Organization and Administration
- R.E. 276. Principles of Curriculum Building
- R.E. 277. Seminar in Curriculum
- R.E. 282. Educational and Vocational Guidance
- R.E. 290. Rural Secondary Education
- R.E. 291. The Educational Program in Undeveloped Communities
- R.E. 299. Seminar: Educational Research Procedures and Techniques
- ILR 80. Development and Organization of Industrial Education
- H.E. Ed. 479. Research in Home Economics Education
- H.E. Ed. 480. Seminar in Home Economics Education

Related Courses in Other Fields:

The student will be advised in choosing courses from the offerings of the following departments: History, Government, Economics, Sociology, and Philosophy.

HOME ECONOMICS EDUCATION . . . Curricula are planned for experienced persons who wish to better qualify themselves as (a) teachers in secondary schools, including those who wish to earn a permanent teaching certificate in New York State, (b) supervising teachers, (c) supervisors, (d) administrators, (e) extension workers, (f) college teachers, (g) other leaders in Home Economics Education.

Principal Courses in Home Economics Education:

- H.E.Ed. 300. Special Problems for Undergraduate Students
- H.E.Ed. 320. } Extension Education
- H.E.Ed. 321. }
- H.E.Ed. 330. } The Art of Teaching
- H.E.Ed. 331. }
- H.E.Ed. 403. Special Problems for Graduate Students
- H.E.Ed. 407. Thesis and Research
- H.E.Ed. 437. Adult Education
- H.E.Ed. 438. Adult Education (advanced)
- H.E.Ed. 439. The Teaching of Home Economics
- H.E.Ed. 449. Curriculum Planning in Home Economics
- H.E.Ed. 459. Evaluation

- H.E.Ed. 469. Administration and Supervision of Home Economics
- H.E.Ed. 479. Research in Home Economics Education
- H.E.Ed. 480. Seminar in Home Economics
- H.E.Ed. 481. Seminar in Supervision in Home Economics
- H.E.Ed. 485. Supervision of Home Management Residence Experience

Related Courses in Education:

- R.E. 106. Outdoor Living
- R.E. 211. Educational Psychology
- R.E. 213. Psychology of Learning in the School Subjects
- R.E. 218. Seminar in Educational Psychology
- R.E. 223. Seminar in Extension Teaching
- R.E. 224. Program Planning in Extension Education
- R.E. 228. Seminar in Child Guidance
- R.E. 241. Preparation of Teachers for Normal Schools and Colleges
- R.E. 243. Procedures and Techniques in Supervision
- R.E. 244. Philosophy of Education
- R.E. 261. Fundamentals of Educational Organization and Administration
- R.E. 276. Principles of Curriculum Building
- R.E. 277. Seminar in Curriculum
- R.E. 278. Seminar in Rural Secondary Education
- R.E. 282. Educational and Vocational Guidance
- R.E. 283. Counseling Methods
- R.E. 290. Rural Secondary Education
- R.E. 291. The Educational Program in Undeveloped Communities
- Ed. 296. History of American Education
- Ed. 297. History of Education in the Modern Period
- R.E. 298. Seminar in Rural Educational Leadership
- R.E. 299. Seminar: Educational Research Procedures and Techniques
- R.E. 400. Internship in Education
- R.E. 401. Problems in Higher Education
- Psych. 601. Educational Psychology
- Psych. 608. Psychological Tests II
- Psych. 618. Individual Differences
- Psych. 675. Seminar in Human Development and Behavior
- C.D. & F.R. 475. Family Life Education

Related Courses in Home Economics:

- Child Development and Family Relationships
- Economics of the Household and Household Management
- Food and Nutrition
- Housing and Design
- Textiles and Clothing

Related Courses in Other Fields:

Culture and Personality	Modern Economic Society
Elements of Journalism	Radio Broadcasting
Extension Organization, Administration, and Policy	Recent American History
Human Relations in Industry	Social Anthropology
International Relationships	Social Psychology
Introduction to Statistical Analysis	The Family
Oral and Written Expression	The Rural Community

INDUSTRIAL AND TECHNICAL EDUCATION . . . Permanent certification for administrators and supervisors of industrial and technical education in New York State requires thirty hours of graduate work. Persons with appropriate undergraduate training who desire to prepare themselves for positions as supervisors of industrial and technical programs and industrial arts, administrative assistants and principals in vocational, industrial, and technical schools and in technical institutes, and city directors of vocational education, will find general and specialized courses suited to their needs in the list shown below. Courses ILR 332, ILR 630, and ILR 632 are designed to meet the special requirements for administrative and supervisory licenses in the industrial and technical education field in New York State.

Principal Courses in Education:

- ILR 330. Origin and Present Patterns of Industrial Education Programs
- ILR 332. Development of Courses of Study in Industrial Education
- ILR 333. Appraisal, Use, and Development of Instructional Materials
- ILR 334. Appraisal and Use of Instructional Methods
- ILR 364. Training in Industry
- ILR 392. Audio-Visual Methods
- ILR 530. Industrial Education
- ILR 631. Seminar in Industrial Education
- ILR 630. Supervision of Industrial Education
- ILR 632. Administration of Industrial Education
- ILR 633. Research Practices in Industrial Education
- ILR 634. Industrial Education in Smaller Communities

Related Courses in Education:

- R.E. 194. Principles of Vocational Education
- R.E. 211. Educational Psychology
- R.E. 219. Seminar in Personnel Administration in Educational Institutions
- R.E. 243. Procedures and Techniques in Supervision
- R.E. 244. Philosophy of Education
- R.E. 245. Seminar for Principals

- R.E. 251. Educational Measurement
- R.E. 253. Introduction to Educational Statistics
- R.E. 255. Use and Interpretation of Tests and Guidance in
Personnel Administration
- R.E. 261. Fundamentals of Educational Organization and
Administration
- R.E. 262. The Secondary School Principalship
- R.E. 276. Principles of Curriculum Building
- R.E. 282. Educational and Vocational Guidance
- R.E. 283. Counseling Methods

Related Courses in Other Fields:

- ILR 293. Survey of Industrial and Labor Relations
- ILR 361. Job Analysis—Methods and Application
- ILR 520. Human Relations
- ILR 550. Labor Union History, Government, and Administration
- ILR 560. Personnel Administration
- ILR 570. Social Security and Protective Labor Legislation

NATURE STUDY, SCIENCE EDUCATION, AND CONSERVATION EDUCATION . . . Opportunities are provided for qualified students to prepare for responsible positions in elementary schools, secondary schools, junior colleges, teachers' colleges and universities, and in state and federal departments as well as for positions outside the teaching profession. Courses are offered in appropriate subject matter, in teaching methods and materials, and in the literature of these fields. Graduate work usually presupposes an adequate background in both the physical and the biological sciences. Cornell's rich tradition in the sciences and in science education has contributed to a unique development and unusually broad offerings in various fields of pure and applied science and in the teaching of these subjects.

Principal Courses in Education:

- R.E. 106. Outdoor Living
- R.E. 107. The Teaching of Nature Study and Elementary School
Science
- R.E. 108. Field Natural History
- R.E. 128. Methods of Teaching Science in Secondary Schools
- R.E. 129. Practice in Teaching Science in Secondary Schools
- R.E. 202. Nature Literature
- R.E. 203. Research and Writing in Nature and Conservation
Education
- R.E. 205. The Teaching of Conservation
- R.E. 207. Methods and Materials for the Teaching of Science in
Secondary Schools

R.E. 209. The Development of Nature and Science Education in the United States

R.E. 226. Research in Science Teaching

Special courses are offered in summer in teaching natural history in the field and in teaching science in different areas.

Related Courses in Education:

R.E. 211. Educational Psychology

R.E. 213. Psychology of Learning in the School Subjects

R.E. 241. The Preparation of Teachers for Normal Schools and Colleges

R.E. 243. Procedures and Techniques in Supervision

R.E. 251. Educational Measurement

R.E. 261. Fundamentals of Educational Organization and Administration

R.E. 276. Principles of Curriculum Building

R.E. 277. Seminar in Curriculum

R.E. 290. Rural Secondary Education

Related Courses in Other Fields are chosen mostly from the following:

Agriculture	Engineering	Nutrition
Astronomy	Entomology	Ornithology
Bacteriology	Extension Teaching	Paleontology
Biology	Genetics	Physics
Botany	Geology	Soils
Chemistry	Limnology	Wildlife Management
Conservation	Meteorology	Zoology

SECONDARY EDUCATION . . . Education on the secondary school levels with its problems of organization, curriculum, functions, and relations with other levels of education is replete with challenges for trained leadership in those areas. With the appropriate undergraduate preparation the courses listed below should help persons to fit themselves for such positions as college teachers of secondary education, master teachers, principals, and supervisors. Those continuing their study in the teaching of any of the several fields of instruction will find the appropriate subject-matter course offerings in the *Announcement of the Graduate School* and the announcements of the several colleges.

Principal Courses in Education:

R.E. 215. Psychology of Adolescence

R.E. 218. Seminar in Educational Psychology

R.E. 244. Philosophy of Education

R.E. 251. Educational Measurement

R.E. 276. Principles of Curriculum Building

R.E. 277. Seminar in Curriculum

Ed. 281. Seminar in Student Personnel Administration

- R.E. 282. Educational and Vocational Guidance
- R.E. 295. Comparative Education
- Ed. 296. History of American Education
- Ed. 297. History of Education in the Modern Period
- R.E. 299. Seminar: Educational Research Procedures and Techniques
- R.E. 300. Special Studies; or Ed. 500. Special Studies
- R.E. 401. Problems in Higher Education
- Psych. 618. Individual Differences
- Psych. 675. Seminar in Human Development and Behavior

Those qualifying for principalships usually take:

- R.E. 243. Procedures and Techniques in Supervision
- R.E. 261. Fundamentals of Educational Organization and Administration
- R.E. 262. The Secondary School Principalship
- R.E. 278. Seminar in Rural Secondary Education
- R.E. 298. Seminar in Rural Educational Leadership

Related Courses in Other Fields:

See the list of courses in Agricultural Economics, Government, Rural Sociology, and Sociology, given under "Administration and Supervision," above.

SOCIAL STUDIES EDUCATION . . . The School of Education offers graduate work for students who wish to prepare themselves for positions of leadership in the field of social studies education. Qualified persons may follow programs designed for prospective teachers or supervisors in secondary schools, junior colleges, teachers' colleges, and universities. Each student is encouraged to plan a program according to his needs.

Cornell provides excellent opportunities for study in the social sciences. Students are urged to take full advantage of offerings in these fields.

Principal Courses in Education:

- R.E. 244. Philosophy of Education
- R.E. 251. Educational Measurement
- R.E. 276. Principles of Curriculum Building
- Ed. 292. Seminar in Social Studies Education
- R.E. 295. Comparative Education
- Ed. 296. History of American Education
- Ed. 297. History of Education in the Modern Period
- R.E. 299. Seminar: Educational Research Procedures and Techniques
- Ed. 500. Special Studies

Related Courses in Education:

- Ed. 200. Apprentice Teaching
- R.E. 211. Educational Psychology
- R.E. 218. Seminar in Educational Psychology
- R.E. 241. The Preparation of Teachers for Normal Schools and Colleges
- R.E. 243. Procedures and Techniques in Supervision
- R.E. 253. Introduction to Educational Statistics
- R.E. 255. Use and Interpretation of Tests in Guidance and Personnel Administration
- R.E. 261. Fundamentals of Educational Organization and Administration
- R.E. 277. Seminar in Curriculum
- R.E. 282. Educational and Vocational Guidance
- R.E. 284. The Teaching of Occupations and Orientation Classes
- R.E. 290. Rural Secondary Education
- R.E. 293. Adult Education
- R.E. 400. Internship in Education
- R.E. 401. Problems in Higher Education
- Psych. 607. Psychological Tests I

Related Courses in Other Fields:

The student in social studies education may wish to select courses from the programs of any of the departments or divisions of the University given below:

History	Geology and Geography
Economics	Industrial and Labor Relations
Government	Philosophy
Sociology	Psychology
English Language and Literature	Speech and Drama

EDUCATIONAL THEORY AND PHILOSOPHY OF EDUCATION

. . . The courses in educational theory are designed to supplement the professional courses in educational practice. They are concerned with the nature and purpose of education as a force in a democratic society. Students who are especially interested in this field are encouraged to select additional courses in philosophy, social theory, psychology, and the history of education.

Principal Courses in Education:

- R.E. 190. Social Foundations of Education
- R.E. 194. Principles of Vocational Education
- R.E. 244. Philosophy of Education
- R.E. 290. Rural Secondary Education
- R.E. 291. The Educational Program in Undeveloped Communities
- R.E. 295. Comparative Education

Ed. 296. History of American Education

Ed. 297. History of Education in the Modern Period

Related Courses in Other Fields:

History of Philosophy

American Philosophy

Modern Philosophers

History of Philosophical Systems

History of Philosophic Ideas

Social Anthropology

Sociological Theory

History of Political Theory

Theory of Culture and Social
Organization

Culture and Personality

Introduction to International
Relationships

ELEMENTARY EDUCATION . . . Cornell offers graduate work of special interest to advanced students of elementary education. Provisions are made for programs of study appropriate for prospective teachers of elementary education in teachers' colleges, master teachers in elementary schools, and specialists in elementary education for state, county, and city school systems. Each candidate will be assisted in planning his program according to his interests and purposes. The following courses merely suggest areas of possible interest.

Principal Courses in Education:

R.E. 107. The Teaching of Nature Study and Elementary School Science

R.E. 108. Field Natural History

R.E. 117. Psychology of Childhood and Adolescence

R.E. 202. Nature Literature

R.E. 205. The Teaching of Conservation

R.E. 209. The Development of Nature and Science Education in the United States

R.E. 213. Psychology of Learning in the School Subjects

R.E. 228. Seminar in Child Guidance

R.E. 246. The Supervision of the Elementary School

R.E. 247. Seminar in Elementary Education

R.E. 276. Principles of Curriculum Building

R.E. 277. Seminar in Curriculum

R.E. 300. Special Studies

R.E. 400. Internship in Education

R.E. 401. Problems in Higher Education

Related Courses in Education, Child Development, and Psychology:

R.E. 129. Practice in Teaching Science in Secondary Schools

R.E. 218. Seminar in Educational Psychology

R.E. 241. The Preparation of Teachers for Normal Schools and Colleges

R.E. 243. Procedures and Techniques in Supervision

R.E. 245. Seminar for Principals

- R.E. 251. Educational Measurement
- R.E. 253. Introduction to Educational Statistics
- R.E. 254. Statistical Instruments in Education
- R.E. 263. The Principalship of the Elementary School
- R.E. 295. Comparative Education
- Psych. 275. History of Experimental Psychology
- Psych. 305. Statistical Methods for Psychologists
- Psych. 375. Analysis and Interpretation of Quantitative Data in Psychology
- Psych. 607. Psychological Tests I
- Psych. 608. Psychological Tests II
- C.D. and F.R. 130. Experience with Children
- C.D. and F.R. 140. Creative Play in Childhood
- C.D. and F.R. 150. Literature for Children
- C.D. and F.R. 305. Methods of Child Study
- C.D. and F.R. 310. Principles for Child Guidance
- C.D. and F.R. 315. Child Development
- C.D. and F.R. 475. Family Life Education

Related Courses in Other Fields:

The advanced student in elementary education may well consider certain offerings in the departments or divisions of the University listed below. The graduate student is encouraged to tap any of the resources of the University which will contribute to the development, enrichment, and integration of his program.

Botany	Speech and Drama	Ornithology
English	Zoology	Philosophy
Entomology	Foods and Nutrition	Psychology
Fine Arts	History	Sociology
Geology and Geography	Music	Family Life

HIGHER EDUCATION . . . The School of Education offers an opportunity for a limited number of superior students to prepare themselves for college teaching and other positions of leadership in higher education. The fields of preparation in which candidates may major for higher degrees are: Administration and Supervision, Agricultural Education, Educational Psychology, Elementary Education, Guidance and Personnel Administration, Home Economics Education, Industrial Education, Nature Study (including Conservation Education), Science Education, Secondary Education, and Social Studies Education.

Because so many different fields are involved, and because programs of preparation within a single field must be adjusted to meet the specific requirements of various types of positions, it is impossible to outline a single sequence of courses which is appropriate for all persons who wish to prepare themselves for positions in higher education.

Courses in the School of Education which give special attention to Higher Education are:

R.E. 214. College Teaching

R.E. 401. Problems in Higher Education

It is impossible in this *Announcement* to suggest the variety of related courses which may be elected by students working toward the Ph.D. degree in Education. Such students carry two minors, one or both of which may be located outside the major field. Each candidate will plan his program in consultation with his graduate committee. To appreciate the richness of offerings at Cornell, the candidate should read carefully the *Announcement of the Graduate School* and the announcements of the Colleges of Arts and Sciences, Agriculture, Home Economics, and of the School of Industrial and Labor Relations.

Description of Courses

RURAL EDUCATION AND EDUCATION

R.E. 10. *PSYCHOLOGY*. Fall or spring term. Credit three hours. M W 10 and one hour to be arranged. Plant Science 233. Professor GLOCK.

Designed for students who are not preparing to teach. Consideration of the outstanding psychological concepts that bear upon personal problems and upon business and social relationships.

[R.E. 106. *OUTDOOR LIVING*. Fall term. Credit two hours. Professor PALMER and Assistant Professor GORDON. Not given in 1950-1951.]

R.E. 107. *THE TEACHING OF NATURE STUDY AND ELEMENTARY SCHOOL SCIENCE*. Spring term. Credit two hours. Open to juniors, seniors, and graduate students, or those who are preparing to teach or supervise science. Lecture, S 8. Practical exercises, S 9-11:30, or, for students interested primarily in education of children of preschool age, F 2-4:30. Fernow 8. Assistant Professor GORDON.

The content and methods of nature-study and elementary-school science with field work and laboratory experience useful in classroom and camp.

R.E. 108. *FIELD NATURAL HISTORY*. Fall or spring term. Credit two hours a term. Preregistration requested. Lecture, T 4:30. Fernow 8. Field work, T 2-4:30. Fall term: Professor PALMER. Spring term: Assistant Professor GORDON.

Field trips and lectures devoted to a study of the natural history of five ecological units under different seasonal conditions, with special emphasis on their contributions to the teaching of science. May be taken one or both terms.

R.E. 111. *EDUCATIONAL PSYCHOLOGY*. Spring term. Credit three hours. Prerequisite, Human Growth and Development, or Psychology 101. Not open to freshmen. Lectures, M W F 9. Warren 201. Professor GLOCK. (Same as Psych. 601.)

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

R.E. 112. *EDUCATIONAL PSYCHOLOGY*. Fall or spring term. Credit three hours. Fall term, M W F 9. Spring term, M W F 10. Warren 325. Associate Professor BAYNE.

Designed for second-term sophomores, juniors, and seniors who plan to become teachers. Students may not receive more than five hours of credit for Courses 10 and 112.

R.E. 117. *PSYCHOLOGY OF CHILDHOOD AND ADOLESCENCE*. Spring term. Credit three hours. Prerequisite, a course in elementary or educational psychology, M W F 11. Plant Science 143. Associate Professor BAYNE.

R.E. 128. *METHODS OF TEACHING SCIENCE IN SECONDARY SCHOOLS*. Fall term. Credit three hours. Prerequisite or parallel course, Rural Education 121 or Education 130, and permission of the instructor. For seniors and graduate students. Th 2-5:30 and additional hours to be arranged. ———.

A consideration of methods and materials useful in teaching science in secondary schools. Observation of the work of experienced teachers constitutes a major part of the course.

R.E. 129. *PRACTICE IN TEACHING SCIENCE IN SECONDARY SCHOOLS*. Fall or spring term. Credit four hours. Prerequisite, Rural Education 128 and permis-

sion of the instructor. For seniors and graduate students. Hours to be arranged.

Supervised practice in teaching science in secondary schools, with frequent conferences on teaching plans and problems.

Ed. 130. *THE ART OF TEACHING*. Fall term: credit five hours; T Th 11 and other hours to be arranged. Spring term: credit five hours; M 4-5:30 and other hours to be arranged. Associate Professor STUTZ, Miss DEPEW, Miss KLEE, Mrs. OCVIRK, Mr. CATALFANO.

For seniors preparing to teach mathematics, English, social studies, science, languages, or art in the secondary schools. A study of general principles of teaching and of special methods of teaching each of these subjects. Opportunity to observe the work of experienced teachers and to do directed teaching in a secondary school.

R.E. 131. *INTRODUCTION TO TEACHING VOCATIONAL AGRICULTURE*. Spring term. Credit one hour (part of the ten-hour unit). Required of juniors and others entering the directed teaching program in the senior or following year. M 2-4:30. Warren 140. Associate Professor SMITH and STAFF in Agricultural Education.

A seminar type of course, with observations in near-by departments of agriculture, in preparation and selection of the trainee for directed teaching in off-campus cooperating school centers.

R.E. 132. *METHODS, MATERIALS AND DIRECTED PRACTICE IN VOCATIONAL 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 prevocational and vocational agriculture on the junior and senior high school levels.

R.E. 133. *SPECIAL PROBLEMS IN VOCATIONAL AGRICULTURE*. Spring term. Credit as arranged. STAFF in Agricultural Education.

Selected problems in Vocational Agriculture to meet particular needs of prospective teachers.

R.E. 134. *THE ORGANIZATION AND DIRECTION OF YOUNG FARMER GROUPS*. Fall term. Credit three hours. Associate Professor HOSKINS and STAFF in Agricultural Education.

Directed participation in off-campus centers in problems of serving the needs of young men on farms to include their location and organization in local areas; the planning of local programs; the evaluation of their qualifications and opportunities for placement and progressive establishment in farming or in the related-farm occupations; and their cooperative relationships with, and the training for leadership in, other youth and adult organizations.

R.E. or Ed. 190. *SOCIAL FOUNDATION OF EDUCATION*. Fall or spring term. Credit three hours. Must be approved by the instructor in charge. Fall term: M W F 9; spring term: M W F 11. Warren 125. Professor MOORE, Associate Professor STUTZ.

Evaluation of the school as a social institution and emphasis upon the role the school must play in a democratic society.

R.E. 194. *PRINCIPLES OF VOCATIONAL EDUCATION*. Spring term. Credit two hours. Open to graduate students and others who have permission to register. T 4:15-6. Warren 140. Associate Professor SMITH.

R.E. 199. *INFORMAL STUDY IN EDUCATION*. Maximum credit, three hours each term. Members of the STAFF.

This privilege is granted to a qualified student of junior rank or above, when approved by his adviser from the Education staff who is personally responsible for the study.

R.E. or Ed. 200. *APPRENTICE TEACHING*. A one-term period off-campus to be arranged. Credit six hours. Members of the STAFF. May be required of a candidate for the M.Ed. degree. Prerequisite: satisfactory completion of the first four years of the five-year program, or the equivalent, or special permission.

Students will be assigned to cooperating schools so selected as to provide the most favorable conditions for this type of experience. They will be expected to carry a half-time teaching program including the usual related responsibilities of the teacher. Preparation for teaching and work on special problems under the direction of University instructors will occupy the remainder of the student's time. Each student will be under the immediate supervision of the principal, of a competent local teacher, and of a member of the staff of the School of Education.

R.E. 202. *NATURE LITERATURE*. Fall term. Credit two hours. Open to seniors and graduate students interested in science and science teaching. Lectures, M W 10. Fernow 8. Assistant Professor GORDON.

A survey of nature and science prose and poetry, with attention to their significance at elementary and secondary school levels and for leisure reading.

[R.E. 203. *RESEARCH AND WRITING IN NATURE AND CONSERVATION EDUCATION*. Spring term. Credit two hours. Professor PALMER. Given in alternate years. Not given in 1950-1951.]

R.E. 205. *THE TEACHING OF CONSERVATION*. Spring term. Credit two hours. T Th 10. Fernow 8. Professor PALMER.

Consideration of the principles, materials, and methods of conservation education useful to teachers and others engaged in teaching wise use of the resources of the nation.

R.E. 207. *METHODS AND MATERIALS FOR THE TEACHING OF SCIENCE IN SECONDARY SCHOOLS*. Spring term. Credit two hours. Registration by permission only. Hours to be arranged. Fernow 8. —.

A consideration of problems of selection and organization of subject matter, of choice and use of materials, and of methods of teaching physical and chemical sciences at the secondary school level.

[R.E. 209. *THE DEVELOPMENT OF NATURE AND SCIENCE EDUCATION IN THE UNITED STATES*. Fall term. Credit two hours. Assistant Professor GORDON. Given in alternate years. Not given in 1950-1951.]

R.E. or Ed. 210. *SPECIAL PROBLEM IN TEACHING*. Fall or spring term. Credit two hours. Members of the STAFF.

A critical study of some phase of teaching undertaken during the period of apprentice teaching.

R.E. 211. *EDUCATIONAL PSYCHOLOGY*. Fall term. Credit three hours. M F 11-12:20. Stone 309. Professor GLOCK.

For mature students with teaching or extension experience. Special emphasis will be given to the topics of growth and development, learning, adjustment, and evaluation, and their relationship to the teacher's problems.

R.E. 213. *PSYCHOLOGY OF LEARNING IN THE SCHOOL SUBJECTS*. Fall term. Credit two hours. S 9-10:30. E. Roberts 223. Associate Professor BAYNE.

R.E. 214. *COLLEGE TEACHING*. Fall term. Credit two hours. M 7-9 p.m. Warren 25. Associate Professor ELLIOTT and others.

Designed for non-Education majors who plan to teach in higher institutions. Methods of teaching, organization of subject matter, motivation, learning, testing, grading, and similar problems will be treated.

R.E. 218. *SEMINAR IN EDUCATIONAL PSYCHOLOGY*. Spring term. Credit two hours. F 4-5:30. Stone 309. Professor GLOCK.

Consideration of problems in the psychology of reading.

R.E. 219. *SEMINAR IN PERSONNEL ADMINISTRATION IN EDUCATIONAL INSTITUTIONS*. Spring term. Credit two hours. Open to graduate students in education. Th 4-6. Warren 201. Professor WINSOR.

A study of the problems of human relations in educational institutions. The methods and principles of recruitment, selection, placement, maintenance, organization, and government of staff and employees are analyzed.

R.E. 223. *SEMINAR IN EXTENSION EDUCATION*. Throughout the year. Credit two hours each term. W 4-5:30. Warren 240. Open to graduate students in Extension Education and others with extension experience. Professor LEAGANS.

Provides opportunity for special study of individual problems, for group study of common problems, and for exchange of experiences among workers from various states.

R.E. 224. *PROGRAM BUILDING IN EXTENSION EDUCATION*. Fall term. Credit two hours. T 2-3:30. Warren 240. For graduate students in Extension Education and others with extension experience. Professor LEAGANS.

A study of the basic problems, principles, and procedures in the process of extension program building for both agriculture and homemaking.

R.E. 225. *TEACHING IN EXTENSION EDUCATION*. Spring term. Credit two hours. T 2-2:30. Warren 240. For graduate students in Extension Education and others concerned with teaching adults. Professor LEAGANS.

The course deals with the identification of the principles of education and their application in extension teaching. Major problems, including the formulation of learning situations, selection and organization of learning experiences, selection and use of extension methods and evaluation of teaching are considered.

R.E. 226. *RESEARCH IN SCIENCE TEACHING*. Fall or spring term. Credit one hour a term. M 12. Fernow 8. Professor PALMER and Assistant Professor GORDON.

Special problems in science teaching.

R.E. 228. *SEMINAR IN CHILD GUIDANCE* (Child Development and Family Relationships 450). Spring term. Credit two hours. W 4-6. Martha Van Rensselaer C-58. Mrs. WARING.

Study of some of the critical issues in guiding children at any age.

R.E. 230. *SEMINAR IN AGRICULTURAL EDUCATION*. Spring term. Credit two hours. For students whose progress in graduate study is satisfactory. W 4-6. Warren 140. Associate Professor HOSKINS and members of the STAFF in Agricultural Education.

R.E. 231. *SUPERVISION IN VOCATIONAL AGRICULTURE*. Spring term. Credit two hours. Open to students with experience in teaching vocational agriculture, or by permission. T 11-1. E. Roberts 223. Associate Professor SMITH.

R.E. 232. *EVALUATION AND PROGRAM PLANNING IN AGRICULTURAL EDUCATION*. Spring term. Credit two or three hours. Th 4:15-6 and special trips to be arranged. Warren 340. Associate Professor HOSKINS.

The evaluation of programs of vocational education in agriculture in actual situations as a basis of more effective planning.

[R.E. 233. *SUPERVISED FARMING PROGRAMS IN VOCATIONAL AGRICULTURE*. Fall term. Credit two or three hours. M 2-5. Professor ——. Not given in 1950-1951.]

R.E. 234. *EDUCATION FOR LEADERSHIP OF FARM YOUTH AND ADULT GROUPS*. Fall term. Credit two or three hours. M 7:15-9 p.m. Stone 309. Associate Professor HOSKINS.

Designed for leaders in the fields of agricultural education who are responsible for organizing programs. A consideration of objectives and trends in part-time education and in social-economic problems in rural areas.

R.E. 235. *THE PREPARATION OF TEACHERS IN VOCATIONAL AGRICULTURE*. Fall term. Credit two or three hours. Open to students with experience in vocational agriculture, or by permission. M 4:15-6 and other hours to be arranged. Stone 309. Associate Professor SMITH.

[R.E. 236. *THE ORGANIZATION AND ADMINISTRATION OF VOCATIONAL AGRICULTURE IN THE SECONDARY SCHOOL*. Spring term. Credit two or three hours. T Th 11-12:30. Associate Professor HOSKINS. Not given in 1950-1951.]

R.E. 237. *COURSES OF STUDY IN VOCATIONAL AGRICULTURE*. Fall term. Credit two hours. T 4:15-6. Warren 240. Associate Professor HOSKINS.

R.E. 238. *MATERIALS OF INSTRUCTION IN VOCATIONAL AGRICULTURE*. Spring term. Credit two hours. Open to students with experience in teaching vocational agriculture. M 7:15-9 p.m. Stone 309.

Evaluation, selection, adaptation, and organization of instructional materials appropriate for use in teaching vocational agriculture classes.

[R.E. 239. *METHODS AND MATERIALS OF INSTRUCTION FOR PREVOCATIONAL AGRICULTURE*. Spring term. Credit two hours. M 7:15-9 p.m. Not given in 1950-1951.]

[R.E. 241. *THE PREPARATION OF TEACHERS FOR NORMAL SCHOOLS AND COLLEGES*. Spring term. Credit two hours. Professor MOORE. Not given in 1950-1951.]

R.E. 243. *PROCEDURES AND TECHNIQUES IN SUPERVISION*. Fall term. Credit three hours. Candidates for a principal's certificate may register for two hours credit. M W F 10. Stone 309. Professor MOORE.

Designed for superintendents, supervisors, and principals. Students taking this course must be prepared to spend four full days or more in observing supervisory procedures in various school systems.

R.E. 244. *PHILOSOPHY OF EDUCATION*. Spring term. Credit two hours. S 9-10:40. Warren 140. Professor MOORE.

For mature students, preferably with teaching experience.

R.E. 245. *SEMINAR FOR PRINCIPALS*. Fall term. Credit two hours. Required of all graduate students who are candidates for a principal's certificate. S 9-10. Stone 214. Professor MOORE.

R.E. 246. *THE SUPERVISION OF THE ELEMENTARY SCHOOL*. Spring term. Credit three hours. Candidates for a principal's certificate may register for two hours credit. T Th 2. Stone 309. Professor MOORE.

A course designed for supervisors, elementary school principals, and superintendents.

[R.E. 247. *SEMINAR IN ELEMENTARY EDUCATION*. Spring term. Credit two hours. Professor MOORE. Not given in 1950-1951.]

R.E. 251. *EDUCATIONAL MEASUREMENT*. Spring term. Credit three hours. Candidates for a principal's certificate may register for two hours credit. Prerequisite, a course in educational psychology. S 11-12:30 and an additional hour to be arranged. Stone 309. Associate Professor BAYNE.

The use of aptitude and achievement tests and other measuring instruments in the classification and guidance of pupils, improvement of instruction, and other activities of the teacher and school officer. Those class members who wish may make a study of their own aptitudes and achievements.

R.E. 253. *INTRODUCTION TO EDUCATIONAL STATISTICS*. Fall term. Credit three hours. T Th 10 and an hour to be arranged. Stone 309. Associate Professor BAYNE.

A study of common statistical procedures in relation to critical reading of technical studies, research, and writing reports of studies. As far as possible, the work is related to the problems of the individual.

[R.E. 254. *STATISTICAL INSTRUMENTS IN EDUCATION*. Spring term. Credit two hours. Professor BAYNE. Not given in 1950-1951.]

R.E. 255. *USE AND INTERPRETATION OF TESTS IN GUIDANCE AND PERSONNEL ADMINISTRATION*. Fall term. Credit two hours. Open to students in guidance or personnel administration. Th 4-6. Stone 309. Professor WINSOR.

This course deals with the development, use, and interpretation of aptitude tests as a basis for guidance and selection.

[R.E. 260. *THE TWELVE-GRADE PRINCIPALSHIP*. Spring term. Credit two hours. Not given in 1950-1951.]

R.E. 261. *FUNDAMENTALS OF EDUCATIONAL ORGANIZATION AND ADMINISTRATION*. Fall term. Credit three hours. T Th 11-12:30. Stone 309. Professor BUTTERWORTH.

A consideration of the main problems in organizing and administering the school program, including the services provided when school and community cooperate in meeting educational needs. Candidates for a state administrative certificate are expected to register also for course R.E. 400.

R.E. 262. *THE SECONDARY SCHOOL PRINCIPALSHIP*. Spring term. Credit two hours. Th 2-4. Warren 201. Associate Professor ELLIOTT.

A course in school administration dealing with the responsibilities of the secondary school principal within the school building. Special attention will be given to the problems of the small high school.

[R.E. 263. *THE PRINCIPALSHIP OF THE ELEMENTARY SCHOOL*. Credit two hours. Professor MOORE. Not given in 1950-1951.]

R.E. 264. *FINANCIAL POLICIES AND PRACTICES IN PUBLIC SCHOOLS*. Fall term. Credit two hours. Prerequisite, 261 or the equivalent. T 4:15-5:45. Stone 309. Professor BUTTERWORTH.

Typical problems: how local school funds are levied, collected, and disbursed; cost accounting; budget making; bonding; sources of state funds and their distribution. The discussion is based upon actual problems; prospective members of the class are urged, therefore, to bring with them financial data regarding their schools.

R.E. 265. *THE SCHOOL PLANT*. Spring term. Credit two hours. Prerequisite, Course 261 or equivalent. S 11-12:30. E. Roberts 223. Professor BUTTERWORTH.

The planning and utilization of the school building to serve community needs. Each student will work on a project for his community.

[R.E. 267. *THE LEGAL PROBLEMS OF THE SCHOOL ADMINISTRATOR*. Credit two hours. Mr. ——. Not given in 1950-1951.]

R.E. 268. *SEMINAR IN RURAL SCHOOL ADMINISTRATION*. Fall term. Credit two hours. S 11-12:30. Stone 309. Professor BUTTERWORTH.
Topic to be announced.

[R.E. 269. *SEMINAR IN CITY SCHOOL ADMINISTRATION*. Spring term. Credit two hours. Not given in 1950-1951.]

R.E. 276. *PRINCIPLES OF CURRICULUM BUILDING*. Fall term. Credit two or three hours. W 4-6 and one hour to be arranged for those enrolled for three hours' credit. Warren 201. Associate Professor ELLIOTT.

A consideration of major problems, principles, and techniques in determining the school curriculum. Students who enroll for curriculum work in a special field may take this course for two hours' credit.

[R.E. 277. *SEMINAR IN CURRICULUM*. Fall term. Credit two hours. Prerequisite, R. E. 276 or equivalent. S 9-11. Associate Professor ELLIOTT. Not given in 1950-1951.]

R.E. 278. *SEMINAR IN RURAL SECONDARY EDUCATION*. Spring term. Credit two hours. F 2-3:30. Warren 201. Associate Professor ELLIOTT.

Identification and analysis of the fundamental problems of secondary education with a view to appraisal of trends.

Ed. 280. *STUDENT PERSONNEL ADMINISTRATION*. Throughout the year. Graduates only. Credit two hours a term or four hours with laboratory work. Prerequisite, Sociology, Psychology, Economics, Political Science, or practical field experience such as teaching, administration, or other kinds of personnel work. T 9-11. Conference Room, Administration Building. Dean LUCILE ALLEN, Dean FRANK C. BALDWIN, and assistants.

Study of counseling and counseling techniques, organization of social program, student activities, health program, orientation, housing, and financial aid as related to personnel administration.

Ed. 281. *SEMINAR IN STUDENT PERSONNEL ADMINISTRATION*. Throughout the year. Graduates only. Credit four hours. Students will be admitted upon consultation with the instructor. Dean LUCILE ALLEN and assistant.

R.E. 282. *EDUCATIONAL AND VOCATIONAL GUIDANCE*. Fall term. Credit two hours. For graduate students only. T 4:15-6. Warren 140. Associate Professor 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.

R.E. 283. *COUNSELING METHODS*. Spring term. Credit four hours. For graduate students only. Prerequisite, Courses 255 and 282 or equivalent. T Th 4:15-6. Warren 240. Associate Professor NELSON.

Techniques for counseling with individuals concerning various types of educational, social, and vocational adjustment problems. Case studies.

R.E. 284. *GROUP TECHNIQUES IN GUIDANCE*. Spring term. Credit two hours. M 4:15-6. Warren 240. Associate Professor NELSON.

Methods and materials for presenting occupational and orientation information to students. Deals with classes in occupations, orientation groups, field trips, clubs, work-experience programs, and other group methods.

R.E. 285. *OCCUPATIONAL AND EDUCATIONAL INFORMATION*. Fall term. Credit four hours. T Th 1. Field trips on Wednesday afternoons. Stone 309. Associate Professor 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.

R.E. 289. *SUPERVISED PRACTICE IN TESTING AND COUNSELING*. Spring term. Credit three hours. Prerequisites, 255, 282, 283, or their equivalents, and the permission of the instructor. For advanced graduate students only. Hours for observation and practice to be arranged. W 5. Associate Professor NELSON.

Practice in the administration, scoring, and interpretation of psychological tests.

Observation and supervised experience in counseling at the Cornell Guidance Center. Case conferences and assigned readings.

R.E. 290. *SECONDARY EDUCATION*. Fall term. Credit three hours. M W F 9. Stone 309. Associate Professor ELLIOTT.

A study of the nature, function, organization, curriculum, and extension of secondary education in its adaptations to present-day needs and conditions. Special emphasis will be given to the small high school.

R.E. 291. *THE EDUCATIONAL PROGRAM FOR UNDEVELOPED COMMUNITIES*. Spring term. Credit two hours. T 4-5:30. Warren 340. Associate Professor ELLIOTT.

Attention is focused on the planning of educational programs for undeveloped communities. Several different countries are called upon for illustration.

Ed. 292. *SEMINAR IN SOCIAL STUDIES EDUCATION*. Fall or spring term. Credit as arranged. T 4:15. Associate Professor STUTZ.

A course designed for resident or extramural students who are working on special problems in social studies education.

[R.E. 293. *ADULT EDUCATION*. Credit three hours. Associate Professor HOSKINS. Not given in 1950-1951.]

[R.E. 295. *COMPARATIVE EDUCATION*. Fall term. Credit two hours. Professors BUTTERWORTH and MOORE. Not given in 1950-1951.]

Ed. 296. *HISTORY OF AMERICAN EDUCATION*. Spring term. Credit three hours. For seniors and graduate students. Prerequisite, consent of the instructor. M W F 9. Associate Professor STUTZ.

A study of educational developments in the United States from the seventeenth century.

[Ed. 297. *HISTORY OF EDUCATION IN THE MODERN PERIOD*. Fall term. Credit three hours. Associate Professor STUTZ. Not given in 1950-1951.]

R.E. 298. *SEMINAR IN RURAL EDUCATIONAL LEADERSHIP*. Spring term. Credit three hours. T Th 11-12:30. Stone 309. Professor BUTTERWORTH and others.

A consideration of the problems especially significant in rural areas. Planned for superintendents, principals, extension workers, social workers, and others preparing for leadership responsibilities in rural education.

R.E. 299. *SEMINAR: EDUCATIONAL RESEARCH PROCEDURES AND TECHNIQUES*. Fall term. Credit two hours. Th 2-3:30. Warren 240. For graduate students preparing for or engaged in research problems in education. Professor LEAGANS and STAFF.

Study is focused on the meaning of scientific method with emphasis on the identification, nature, and possible approaches to the basic problems commonly faced by students in conducting a research project in education.

R.E. 300. *SPECIAL STUDIES*. Credit as arranged. Members of the STAFF. Students working on theses or other research projects may register for this course.

The staff members concerned must be consulted before registration.

R.E. 400. *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 administration, agricultural education, guidance, personnel administration, supervision, and other types of professional service in education.

R.E. 401. *PROBLEMS IN HIGHER EDUCATION*. Spring term. Credit two hours. T 4:15-5:45. Plant Science 141. Professor BUTTERWORTH, Professor PETRY, and others.

A seminar dealing with faculty and student personnel problems, and with the

organization, curriculum, administration, physical plant, and financing of institutions of higher education, including junior colleges, community colleges, and institutes.

Ed. 499. *INFORMAL STUDY IN EDUCATION*. Maximum credit three hours each term. Members of the STAFF.

Ed. 500. *SPECIAL STUDIES*. Credit as arranged. Members of the STAFF.

Students working on theses or other research projects may register for this course. The staff members concerned must be consulted before registration.

CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS

C.D. & F.R. 475. *FAMILY LIFE EDUCATION* (at the college and secondary levels). Spring term. Credit three hours. T Th 11-12:30. Van Rensselaer 121. Professor Rockwood.

This course is designed to meet the needs of men and women who are interested in a functional approach to family life education at the college and secondary school levels. Among the topics to be considered are developments in family life education in the past thirty years and present status of the movement; philosophy and emphasis in programs of family life education at the college and secondary school levels; problems related to the planning and conduct of courses in marriage and family relationships; research and teaching; the teacher as a counselor; professional preparation.

For other courses in this department, see the Announcement of the College of Home Economics.

HOME ECONOMICS EDUCATION

H.E. Ed. 110. *HOMEMAKING EDUCATION AND THE COMMUNITY*. Fall term. Credit one hour. T 9. Room 124. DEPARTMENT STAFF. Associate Professor HOEFER, coordinator.

This course is offered to help the student who is planning to be a homemaker to understand the place in which she may serve in educational programs in her community. It will also give her a basis for understanding ways in which Home Economics serves all members of the family. It may help her in making a vocational choice. Opportunity will be given to observe homemaking programs which are being conducted by the extension service, public schools, and other educational agencies.

H.E. Ed. 300. *SPECIAL PROBLEMS FOR UNDERGRADUATE STUDENTS*. Fall and spring terms. Credit and hours to be arranged. DEPARTMENT STAFF.

For students recommended by advisers and approved by the head of the Department and the instructor in charge for independent, advanced work not otherwise provided in the Department.

H.E. Ed. 320. *EXTENSION EDUCATION*. Fall and spring terms. Credit two hours. Open to juniors and seniors preparing for 4-H Club or home demonstration work. This course must precede Extension Education 321. Discussion period, F 2-4. Room 3M11. Associate Professor HOEFER.

Opportunity will be provided to observe extension and other community programs.

H.E. Ed. 321. *EXTENSION EDUCATION*. Fall and spring terms. Credit eight hours. Associate Professor HOEFER. Supervised field experience for one-half of the term in a selected county and conference periods for one-half of the term. Prerequisite, Extension Education 320. During this term students will take Homemaking Apartments 302. Students live in the Homemaking Apartments for seven weeks and in the county in which they are doing extension work for seven weeks.

Students are assigned to cooperating counties where opportunity is provided to work with the county extension staff and to gain experience in 4-H Club and/or home demonstration work. They live in the county and work under the direction and guidance of the local extension agents. A member of the college staff supervises this field experience. Students observe, assist, and participate in the program of the county extension groups. They should gain experience in teaching 4-H Club and/or home demonstration groups, in office management, radio, newswriting, and working with other county agencies, and in others of the usual activities of an extension agent.

H.E. E. 330-331. *THE ART OF TEACHING*. To be taken in two successive terms. Open to juniors and seniors preparing to teach home economics in the public schools. Assistant Professor MOSER, coordinator, assisted by Associate Professor PATTERSON, Assistant Professor CRAWFORD, MRS. BATEMAN, Miss ELLIOTT, and cooperating teachers.

Student teachers have an opportunity to study the community and the place of home economics in the total educational program of the community. They observe and participate in community activities in the total school program, and in the Home Economics program.

330. Fall and spring terms. Credit two hours. This course must precede Home Economics Education 331. Discussion period. T Th 8. Room 3M11.

Field work one-half day a week. Students visit schools for the purpose of studying homemaking programs, furnishings, and equipment.

331. Fall and spring terms. Credit eight hours. Directed teaching for one-half of the term and general conferences throughout the term. Hours to be arranged. Room 3M11. This course is a continuation of Home Economics Education 330. During this term the student registers for only one other course, Homemaking Apartments 302. Students live in the Homemaking Apartment for one-half of the term and in the communities in which they teach for the other half of the term. Student teachers are assigned to cooperating schools within a reasonable distance of Ithaca. They live in the communities and work under the guidance of the local homemaking teachers and under the supervision of the Home Economics Education Staff.

H.E. Ed. 403. *SPECIAL PROBLEMS FOR GRADUATE STUDENTS*. Fall and spring terms. Credit and hours to be arranged. DEPARTMENT STAFF.

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

H.E. Ed. 407. *THESIS AND RESEARCH*. Fall and spring terms. Credit and hours to be arranged. Registration with permission of the chairman of the graduate committee and the instructor. Professor HUTCHINS, Associate Professors HOEFFER and PATTERSON, Assistant Professors BLACKWELL, CRAWFORD, and MOSER.

[H.E. Ed. 435. *METHODS AND MATERIALS IN TEACHING HOME ECONOMICS*. Fall term. Credit two hours. Professor HUTCHINS. Not given in 1950-1951.]

H.E. Ed. 437. *ADULT EDUCATION*. Fall and spring terms. Credit two or three hours. M 4 and other hours to be arranged. Room 124. Preregistration required. Associate Professor PATTERSON.

Planned for administrators, supervisors, extension agents, and teachers. Attention is focused on finding educational needs, planning programs and learning experiences for adults, leadership, promotion, philosophy, and evaluation in adult education. Opportunity is provided for participation in adult education activities. Time must be planned for observation. Estimated cost of transportation, \$3 to \$5.

[H.E. Ed. 438. *TEACHING HOMEMAKING TO ADULTS*. Fall and spring terms. Credit two or three hours. Associate Professor PATTERSON. Not given in 1950-1951.]

H.E. Ed. 439. *THE TEACHING OF HOME ECONOMICS*. Spring term. Credit two hours. T 4 and other hours to be arranged. Room 124. Preregistration required. Associate Professor PATTERSON.

Designed for students with teaching experience in college, extension, secondary school, and adult programs. Attention is given to the place of discussion, demonstration, laboratory, trips, and use of radio, films, and recordings in teaching home economics. Opportunity is provided for experimenting with different teaching aids and procedures.

H.E. Ed. 449. *CURRICULUM PLANNING IN HOME ECONOMICS*. Fall term. Credit one hour. Students must also register for two credits of R.E. 276. Th 4. Room 301. Preregistration required. Assistant Professor BLACKWELL.

For experienced teachers. Provides opportunity to apply basic principles of curriculum development in planning homemaking programs at secondary and college levels. Field work required for two half-days during semester. Estimated transportation cost, \$3.

H.E. Ed. 459. *EVALUATION*. Spring term. Credit two hours. S 10. Room 301. Preregistration required. Assistant Professor BLACKWELL.

For teachers, extension agents, and research workers who are concerned with methods of evaluating education programs and of appraising individual achievement. Opportunities for constructing, using, and evaluating instruments of appraisal.

[H.E. Ed. 469. *ADMINISTRATION OF HOME ECONOMICS*. Spring term. Credit two hours. Professors HUTCHINS. Not given in 1950-1951.]

[H.E. Ed. 479. *RESEARCH IN HOME ECONOMICS EDUCATION*. Credit two hours. Assistant Professor BLACKWELL. Not offered in 1950-1951.]

H.E. Ed. 480. *SEMINAR IN HOME ECONOMICS EDUCATION*. Spring term. Credit one hour. W 4-6. Room 124. DEPARTMENT STAFF. Preregistration required. Professor HUTCHINS, coordinator.

H.E. Ed. 481. *SEMINAR IN SUPERVISION IN HOME ECONOMICS EDUCATION*. Spring term. Credit two hours. DEPARTMENT STAFF. Preregistration required. Professor HUTCHINS, coordinator.

H.E. Ed. 485. *SUPERVISION OF HOME MANAGEMENT RESIDENCE EXPERIENCE*. Spring term. Credit two hours. T 9-11. Apartment A. Preregistration required. Assistant Professor CRAWFORD.

This course is planned for Home Management House advisers and others preparing for this type of teaching. Attention is focused on organization, supervision, and methods of teaching a residence course.

INDUSTRIAL AND TECHNICAL EDUCATION

[ILR 330. *ORIGIN AND PRESENT PATTERNS OF INDUSTRIAL EDUCATION PROGRAMS*. (Undergraduate and graduate) Credit two hours. Not offered in 1950-1951.]

ILR 332. *DEVELOPMENT OF COURSES OF STUDY IN INDUSTRIAL EDUCATION*. (Undergraduate and graduate) Credit two hours. Summer term.

Study of the principles and procedures of course-of-study development. Content will include objectives of general and vocational education, and their bearing on courses of study; controls which influence courses; interrelationships of courses within the curriculum; evaluation of courses of study. Emphasis will be placed upon the development of specific courses based upon occupational and other analyses.

ILR 333. *APPRAISAL, USE, AND DEVELOPMENT OF INSTRUCTIONAL MATERIALS*. (Undergraduate and graduate) Credit two hours. Fall term.

Study of the various types of instructional materials such as textbooks, instruction sheets, manuals, and audio-visual aids; conditions under which the various types are effective; methods of use of instructional materials; sources; the use of instructional materials in schools, industrial organizations, and organized labor. Considerable attention will be given to the procedures and techniques used in developing new instructional materials.

ILR 334. *APPRAISAL AND USE OF INSTRUCTIONAL METHODS*. (Undergraduate and graduate) Credit three hours. Fall term.

Study of the various methods of instruction applicable to adult groups, with special reference to workers and supervisors in industry. Content will include a review of educational objectives and principles of learning; demonstration and discussion of on-the-job training, group teaching, conferences, panels, symposiums, role playing, and other methods; applications of these methods to specific situations. Special emphasis will be placed on group discussion leadership, and students will be expected to lead group discussions on current topics and problems.

ILR 364. *TRAINING IN INDUSTRY*. Credit three hours. Spring term.

A study of purposes underlying the establishment of plant training programs; patterns of organization, administration, and operation; out-of-plant supplementary educational facilities; sources and qualifications of plant training personnel; and types of programs such as orientation, on-the-job training, apprenticeship, supervisor and executive training, and out-of-hours courses.

ILR 392. *AUDIO-VISUAL METHODS*. Credit three hours. Spring term. Open to juniors, seniors, and graduate students.

A discussion of the effectiveness of audio-visual methods as a means of communication. Training in the preparation and proper use of audio-visual materials and the methods of operation of various kinds of audio-visual devices. Stress is placed on the contributions of audio-visual methods to the solution of problems of mass communication.

ILR 530. *INDUSTRIAL EDUCATION*. Spring term.

A graduate course providing a broad overview of educational principles and practices pertaining to training within industry, workers, education, and industrial education in public and private institutions. Basic principles of adult education; methods of teaching adults; development of courses of study; appraisal and development of instructional materials; organizational patterns of programs; legislation affecting industrial education; interrelationships between public industrial education, management, and organized labor. This course is designed for students working toward the M.S. in I.L.R. degree but would be of value to the student in Education who desires a single overview course in Industrial and Technical Education.

ILR 631. *SEMINAR IN INDUSTRIAL EDUCATION*. Fall term.

A graduate seminar dealing with problems of special importance in the field of public industrial and technical education at the present time. Current socioeconomic developments which have bearing on industrial education; growth of adult and post-secondary programs of industrial and technical education; work experience training for youth; changing patterns of educational administrative districts; integration of general and vocational education, with its impact on curriculum; evaluation of programs.

ILR 699. *SPECIAL STUDIES*. Directed research in special problems.

ILR 630. *SUPERVISION OF INDUSTRIAL EDUCATION*. Summer term.

Study of the nature and purpose of educational supervision; fundamental principles of supervision; techniques and methods of supervision; the planning and organization of a supervisory program; the supervisor's responsibility for appraising the adequacy of equipment, materials, and supplies for instructional purposes; rela-

tionships of the supervisor to administrators and teachers; evaluation of student and teacher achievement.

ILR 632. *ADMINISTRATION OF INDUSTRIAL EDUCATION*. Summer term.

Study of administrative practices in industrial and technical schools. Relationships of the administrator with other school officers; advisory committees and their functioning; public relations; problems of plant and equipment; budgetary procedures; staff personnel relations; teacher selection and induction; student personnel procedures; evening school organization and administration.

ILR 633. *RESEARCH PRACTICES IN INDUSTRIAL EDUCATION*. Summer term.

A study of research in the field of industrial education, including industrial arts, vocational industrial and technical education; the techniques of research applicable to these fields; implications in existing research for industrial education; trends in research, particularly as they apply to youth and adults not now being served by industrial education programs.

ILR 634. *INDUSTRIAL EDUCATION IN SMALLER COMMUNITIES*. Summer term.

The organization and conduct of industrial education programs serving smaller high schools or consolidated school districts. Emphasis will be placed upon diversified part-time cooperative programs, apprentice training classes and vocational schools, county unit programs, and intermediate school districts.

PSYCHOLOGY

Psych. 575b. *THE TEACHING OF PSYCHOLOGY*. Spring term. Credit two hours. For graduate students who are planning to become college and university teachers of psychology. Consent of instructor is required. M 4-6. Professor FREEMAN.

The place of psychology in a college curriculum; organization of psychology curricula and of individual courses; methods and devices in the teaching of psychology.

Psych. 601. *EDUCATIONAL PSYCHOLOGY*. Fall term. Credit three hours. Primarily for undergraduate prospective teachers. Prerequisite, Human Growth and Development. M W F 11. Professor FREEMAN. (Same as R.E. 111)

Other qualified students may be admitted by consent of the instructor.

Psych. 607. *PSYCHOLOGICAL TESTS I*. (Tests of intelligence and specific aptitudes.) Fall term. Credit three hours. Not open to sophomores. Prerequisite, a course in psychology and a course in statistics, or consent of the instructor. T Th S 9. Professor FREEMAN.

Basic psychological principles in the construction and use of individual and group tests of intelligence and specific aptitudes; theories of the nature of mental abilities; fields of application; intensive study of selected individual scales. Demonstrations in administering and interpreting individual scales.

Psych. 608. *PSYCHOLOGICAL TESTS II*. (Tests of personality and social behavior.) Spring term. Credit three hours. Prerequisite, Psych. 607 or consent of the instructor. T Th S 9. Professor FREEMAN.

Basic psychological principles in the construction and use of personality rating scales, personality inventories, projective techniques, and situational tests. Demonstrations.

Psych. 618. *INDIVIDUAL DIFFERENCES*. Spring term. Credit three hours. Prerequisite, Psych. 607 or equivalent or consent of instructor. T Th 2-3:15. Professor FREEMAN.

The nature, causes, and implications of individual differences in human abilities and behavior. Study of atypical groups.

Psych. 675. *SEMINAR IN HUMAN DEVELOPMENT AND BEHAVIOR*. Spring term. Credit two hours. For seniors and graduate students. Consent of the instructor is required. M 4-6. Professor FREEMAN.

Recent experimental and clinical materials and theories; educational implications.

Psych. 680. *PROCEDURES IN CLINICAL CHILD GUIDANCE*. Fall term. Credit three hours. Prerequisite, Psych. 607 or its equivalent. Primarily for graduate students. All students must have consent of the instructor. M 4-6 and conferences. Professor FREEMAN.

Procedures and instruments used in case studies of psychoeducational problems of learning and adjustment. Study of case materials.

CLINICAL AND PREVENTIVE MEDICINE

[108. *MENTAL HYGIENE*. Spring term. Credit three hours. Open to sophomores and upperclassmen. M W F 11. Dr. DARLING. Not given in 1950-1951.]

[202. *PERSONAL AND COMMUNITY RESPONSIBILITY FOR HEALTH*. Fall term. Credit two hours. Open to upperclassmen (minimum registration 25). Th 4-6. Dr. MOORE and associates. Not given in 1950-1951.]

NOTE: For other courses in health and nutritional subjects, see the *Announcement of the Independent Departments*.

INTERDEPARTMENTAL COURSES

101. *INTRODUCTION TO THE STUDY OF SOCIETY*. Either term. Credit three hours. Open to freshmen. Not open to those who have credit for Social Science I or Rural Sociology I. M W F 8, 10, 12 or 2; T Th S 8, 10, or 11. PROFESSOR BARRON and members of the Staff.

An introduction to the study of societies as interrelated systems; their institutional and class structures; social factors in personality formation; selected major problems of contemporary American society as seen in the context* of our own social system.

The following course is offered cooperatively by the Department of Zoology and Psychology:

201-202. *HUMAN GROWTH AND DEVELOPMENT*. Throughout the year. Credit three hours a term. Not open to freshmen. Prerequisite, a laboratory science, preferably General Biology or Zoology. Course 201 is prerequisite to Course 202. Course 201 — fall term: Lectures, T Th 10; Recitation, M 8, T 8, 9, 11, 12, Th 8, F 8, 10, 11. Professor PAPEZ. Course 202 — spring term: Lectures, T Th 10; Recitations, T 8, T 9, Th 9, Th 11, F 8, 10, S 10. Professor FREEMAN.

The aim of this course is to integrate information about structural, physiological, behavioral, and intellectual aspects of growth and development that will help educators to understand human individuals as functioning organisms in a social environment. The materials of the course are selected from pertinent fields, including anatomy, embryology, genetics, neurology, physiology, hygiene, sociology, cultural anthropology, developmental psychology, and education.