

CORNELL UNIVERSITY ANNOUNCEMENTS

SUMMER SCHOOL

1962

JUNE 27 AUGUST 10

SUMMER SESSION OFFICE

THE OFFICE of the Summer Session is in Room 117, Edmund Ezra Day Hall; the telephone number of the office and of the Director is AR 5-5192. The office will be open from 8 a.m. to 4:30 p.m., except Saturday, during the period of the Summer School; on Saturday the office will close at 12 noon. Professor William A. Smith is Director.

ADMINISTRATIVE BOARD

William A. Smith, Ph.D., Director of the Summer Session and Professor of Education

Damon Boynton, Ph.D., Dean of the Graduate School and Professor of Pomology

Thomas W. Mackesey, M.C.P., Dean of the University Faculty and Professor of Regional Planning

Frederick H. Stutz, Ph.D., Professor and Dean, School of Education

George C. Kent, Ph.D., Professor and Head of Plant Pathology

George A. McCalmon, Ph.D., Professor of Speech & Drama

William D. Cooke, Ph.D., Professor of Chemistry

Jean Failing, Ph.D., Professor and Coordinator of Resident Instruction, College of Home Economics

True McLean, E.E., Professor of Electrical Engineering

SUMMER SCHOOL

JUNE 27—AUGUST 10

1962

CORNELL UNIVERSITY ANNOUNCEMENTS

Volume 53. Number 16. March 12, 1962.

Published twenty times a year, in each month except February and November, by Cornell University at Edmund Ezra Day Hall, 18 East Avenue, Ithaca, New York. Second-class postage paid at Ithaca, New York.

GOVERNMENT

THE GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF THE COMMISSIONER OF THE DISTRICT OF COLUMBIA
WASHINGTON, D. C.

THE DISTRICT OF COLUMBIA
OFFICE OF THE COMMISSIONER OF THE DISTRICT OF COLUMBIA
WASHINGTON, D. C.

THE DISTRICT OF COLUMBIA
OFFICE OF THE COMMISSIONER OF THE DISTRICT OF COLUMBIA
WASHINGTON, D. C.

THE DISTRICT OF COLUMBIA
OFFICE OF THE COMMISSIONER OF THE DISTRICT OF COLUMBIA
WASHINGTON, D. C.

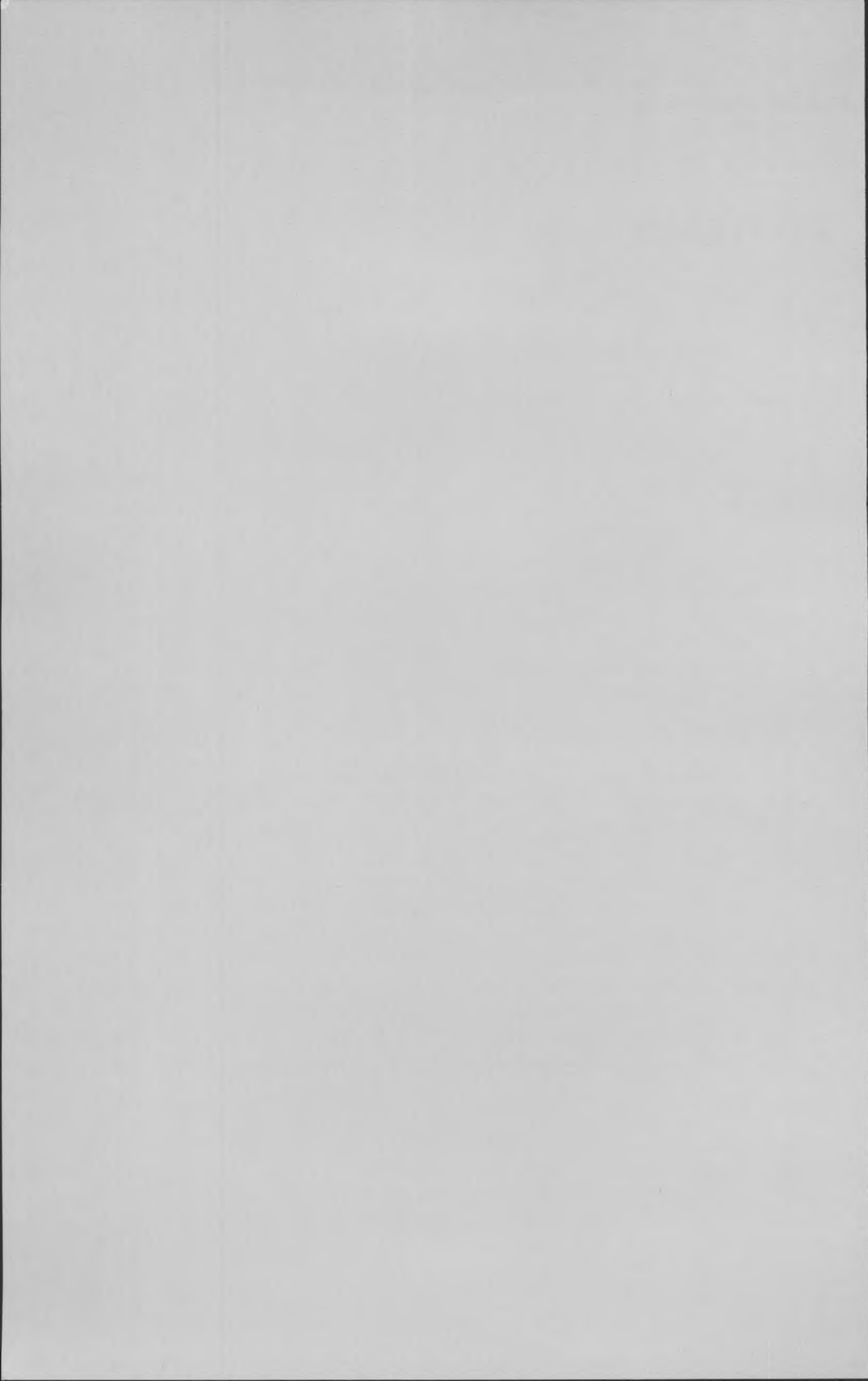
THE DISTRICT OF COLUMBIA
OFFICE OF THE COMMISSIONER OF THE DISTRICT OF COLUMBIA
WASHINGTON, D. C.

THE DISTRICT OF COLUMBIA
OFFICE OF THE COMMISSIONER OF THE DISTRICT OF COLUMBIA
WASHINGTON, D. C.

THE DISTRICT OF COLUMBIA
OFFICE OF THE COMMISSIONER OF THE DISTRICT OF COLUMBIA
WASHINGTON, D. C.

CONTENTS

CALENDAR	1
GENERAL INFORMATION	2
Admission	2
Academic Credit	4
Registration	6
Tuition and Fees	6
Veterans	8
The Graduate School	8
Housing and Dining	10
Health Services	12
Counseling Services	13
Libraries	13
Special Regulations	14
The Weekly Calendar	15
Extracurricular Activities	15
CURRICULUM	19
OTHER PROGRAMS OF THE SUMMER SESSION	
Agricultural Education	47
Agricultural Engineering	48
Engineering Industrial Cooperative Program	48
English Language Program for Foreign Students	50
Home Economics Education Program	50
Hotel Administration	51
Reading and Study Skills Program	51
Regional Extension Summer School	51
Shell Merit Fellowship Program	51
Southeast Asia Language Program	52
Advanced-Placement Program for Secondary School Students	52
OFFICERS	53
FACULTY	53
INDEX	56



CALENDAR

REGULAR SUMMER SCHOOL SESSION, 1962

- June 27, *Wednesday* Registration for the regular Summer School session: undergraduates, 9 a.m. to 12 noon; graduate and special students, 1:30 p.m. to 3:30 p.m., in Barton Hall. Tuition and fees are due for payment at the Treasurer's Office, 260 Day Hall. Persons registering after this date without prior approval will pay a \$10 fee for late registration.
- June 28, *Thursday* Instruction begins at the time and place announced for each course. Late registrants report to the Summer Session Office, 117 Day Hall, to complete registration.
- June 29, *Friday* Last day for withdrawal from Summer School without payment of a fraction of tuition and fees.
- July 2, *Monday* Last day for payment of tuition and fees at the Treasurer's Office, which closes at 4:30 p.m.
- July 4, *Wednesday* Holiday.
- July 6, *Friday* Last day for making changes in registration *without payment of fee* at the Summer Session Office. A \$10 fee for change in registration will be charged after this date.
- July 9, *Monday* Registration and first day of instruction for the three-week unit Special Session in Agriculture. Registration at the Summer Session Office.
- July 20, *Friday* Last day for making changes in registration. *No changes will be permitted after this date.*
- July 23, *Monday* Registration for the second period of any three-week unit courses at the Summer Session Office.
- August 9, *Thursday* Final examinations begin; schedule on page 19.
- August 10, *Friday* Summer School ends, 4 p.m.

Be sure to bring this Announcement with you for use on registration day and throughout the Summer School.

GENERAL INFORMATION

CORNELL UNIVERSITY is situated in Ithaca, in the beautiful Finger Lakes region of upstate New York. In its Summer School, academic instruction at both graduate and undergraduate levels is offered by members of the faculties of the Graduate School, of the Colleges of Architecture, Arts and Sciences, Engineering, Agriculture, and Home Economics, and of the Schools of Education, Industrial and Labor Relations, and Hotel Administration.

This unification of the curricula and faculties of the several schools and colleges makes possible the adaptation of academic work to the special needs of students in the summer. Undergraduate courses are equivalent to required and elective collegiate courses in the academic year leading to the baccalaureate. Advanced courses, seminars, and informal study, treating topics of concern to students with special interests, are available. The program is designed with particular regard for what can be treated satisfactorily in a short term and in the summertime. The needs of teachers are met not only in the workshops, seminars, and professional courses in Education, but also in courses in a number of subject fields. A number of sessions, some of which operate concurrently with the Summer School session, are offered for professional workers other than teachers. For description of other sessions, see pages 47-52.

All necessary facilities of the University are available to students registered in the Summer School: libraries, classrooms, and laboratories; residence halls, dining rooms, and cafeterias; health services and medical care; counseling services; student union, chapel, playing fields, and recreational areas.

ADMISSION

The Summer School's objective is to place the facilities of the University at the disposal of persons who can use them to good advantage and for serious purposes during the summer period.

Admission of undergraduate or graduate students to the Summer School establishes no priority with respect to admission to the regular terms. Students seeking admission to Cornell undergraduate colleges should apply to the Director of Admissions, 239 Day Hall, before March first of the year in which entrance is desired.

Students are eligible for admission to the Summer School in the following categories:

UNDERGRADUATES

This category includes all persons who are candidates in good standing for the Bachelor's degree and those precollege, high school graduates who have been accepted for admission to Cornell University or elsewhere. No other high school students will be accepted except in certain other programs of the Summer Session described on page 51.

Undergraduates are required to preregister for a program of courses totaling between three and seven credit hours. A program of more than seven credit hours will be permitted only to students with high academic averages. Application for admission consists of completing the undergraduate application form found in the back of this Announcement or which will be mailed on request. An undergraduate candidate for degree at Cornell University must have his application approved by the appropriate officer of his school or college (see p. 5).

June 20, 1962, is the closing date for admission of undergraduates.

High school graduates and undergraduate degree candidates should consult the appropriate official either in the college to which they have been admitted or in the college where they are now matriculated for advice in planning their summer study programs. This is recommended in order that they may be assured that the credit earned will be appropriate to their degree programs. Courses in Summer School carry credit equivalent in amount and value to that available in the comparable academic year courses offered at Cornell. Undergraduates are not permitted to register for audit except by permission of the Director of the Summer School.

Grades for courses studied by Cornell graduate and undergraduate students are automatically sent to their college offices. For all other students, a transcript of the academic record for study in the Summer School will be sent to the college of the student's choice only upon request directed to the University Registrar.

GRADUATES

This classification is only for candidates for advanced degrees at Cornell University or elsewhere. Application for admission to the Summer School should be made before June 15. A graduate student may register as late as June 27 but is advised to select courses by June 15 in order to insure a place in classes. The graduate application form will be found in the back of this Announcement or will be mailed on request. Admission to the Summer School in this category does not constitute admission to the Graduate School of Cornell University as a candidate for an advanced degree.

A graduate student matriculated in the Graduate School of Cornell University may, upon the recommendation of his Special Committee chairman, register for as many as eight hours of credit. Six credit hours constitute a minimum program for residence credit. (See page 9 for information regarding admission to the Graduate School.)

A graduate student who is a candidate for a degree at an institution other than Cornell University, and who is planning to obtain credit toward this degree by means of his Summer School work, does *not* register in the Cornell Graduate School but only in the Summer School. Before registering he should arrange for the accrediting of his work by the institution from which he plans to take his degree.

4 SUMMER SCHOOL

SPECIAL STUDENTS

A mature person who is not a candidate for an academic degree will be admitted to the Summer School in courses taken for credit for vocational or personal purposes. Such a person would apply for admission by completing the "special students" application form found in the back of this Announcement or mailed on request. A "special student" may apply for admission as late as June 27 but is advised to select courses by June 15 in order to insure a place in classes. Programs of more than eight hours of credit must have the approval of the Director of the Summer Session.

APPLICATION FOR ADMISSION

Application for admission to the Summer School of 1962 must be made on an application form found in the back of this Announcement. Request for an additional copy should be addressed to the Director of the Division of Summer Session and Extramural Courses. In most cases the information called for on this form will be sufficient. When requesting an application, please indicate whether for undergraduate, graduate, or special student status.

Registration coupons, necessary for registration in the Summer School, will be mailed to the applicant after favorable action on the application has been taken. Included is a Certificate of Admission.

ACADEMIC CREDIT

All courses offered in the Summer School are assigned appropriate hours of credit. Students are not to register for any course work which normally cannot be completed by the end of the Summer School term.

In this Announcement each course is marked immediately after the title in one of three ways:

(U): These courses carry undergraduate credit. Students registered in the Graduate School of Cornell University will not receive credit toward advanced degrees for these courses unless such credit is specifically recommended by the committees in charge of their work.

(U,G): These courses are offered both at the graduate and undergraduate levels. Graduate students who are candidates for advanced degrees or who wish certification for work done at the graduate level must indicate at the time of registration their intention to complete the course at the graduate level and must be prepared to do any additional work that may be required. Such students registered in "U,G" courses should consult with their instructors early in the session to see that the level is properly recorded. Accuracy of final grade reporting depends upon such action.

(G): These courses are intended primarily for students who are candidates for advanced degrees, for teachers, and for others who wish certification to accrediting agencies for work done at the graduate level. Undergraduates with adequate preparation may register for these courses only after receiving permission from the instructors in charge.

AUDITORS

A graduate or special student who desires to attend a course or courses for no credit may register for such courses as an auditor. Such registration requires regular attendance in the class and completion of all required work except examinations. Undergraduates are not permitted to register for audit except by permission of the Director of the Summer School.

A mark of "V" will be recorded for satisfactory completion of a course. Tuition for auditing a course will be charged at the same rate as for credit.

CREDIT TOWARD DEGREES AT CORNELL UNIVERSITY

A student matriculated in an undergraduate school or college of Cornell University will be admitted to the Summer School only after the officer from the following list has approved and signed his application for admission.

College of Agriculture: Professor J. P. Hertel.

College of Architecture: Dean Burnham Kelly.

College of Arts and Sciences: Associate Dean M. L. Hulse.

College of Home Economics: The student's counselor.

College of Engineering: *Chemical*, Professor C. C. Winding; *Civil*, Professor N. A. Christensen; *Electrical*, Professor W. H. Erickson; *Mechanical*, Professor G. R. Hanselman; *Engineering Physics*, Professor T. R. Cuykendall.

School of Hotel Administration: Dean R. A. Beck.

School of Industrial and Labor Relations: Mr. Donald P. Dietrich and Mr. Floyd S. Irvin.

This approval will indicate that the school or college will accept credit in the designated courses as credit toward a degree.

GRADES

All course grades are reported on the basis of a numerical scale from 0 to 100. The only exceptions permitted are for registrations for audit and for those offerings for graduate students involving individual work such as in research and special problems. In the case of auditors the record for satisfactory completion will be "V" ("Visitor") to be recorded on the official transcript. A mark of "Satisfactory" (S) or "Unsatisfactory" (U) may be used for graduate students registered for research and other individual work.

If a student is prevented, for medical or other reasons acceptable to the instructor, from completing the work in any course before the last day of the session, he may request the instructor to report his grade as "Incomplete." In such cases the instructor will report the mark as "Inc" together with a conditional mark of 50 or less. *This will become the final recorded grade for the course if the work is not completed by January 1, 1963.* It is the student's responsibility to make such specific arrangements with his instructors. Students are not to register for any work which normally cannot be completed by the end of the Summer School term.

A student who drops a course without official change in registration will automatically receive a failing grade.

The colleges of Cornell University regard the grade of 60 as the lowest passing grade.

REGISTRATION

Registration for the Summer School Session will take place on Wednesday, June 27, in Barton Hall. The certificate of admission, sent to each pre-admitted student, will give the hour of the day at which he will be admitted to the Hall. Directions for registration procedure will be issued at the entrance. Students who, for any reason, have not received a certificate of admission will report to the Admissions table in Barton Hall: undergraduates at 9 a.m.; graduates and specials at 1:30 p.m. Persons who fail to appear for registration in Barton Hall on June 27, during the scheduled registration hours, will be charged a fee of \$10 for late registration unless the fee is waived through prior approval.

Formal registration is required for admission to any of the classes of the Summer School.

CHANGES IN REGISTRATION

All changes in registration after Wednesday, June 27, must be made by appearing at the Summer Session Office, 117 Day Hall, before 4 p.m. on July 20. (See below for penalty fees.) *No change in registration will be permitted after 4 p.m. on July 20.* When a change in registration involves enrollment in another course, the permission of the instructor of the new course is necessary.

Changes in registration include cancellation of a course, change from one course to another, change in graduate or undergraduate level, addition of a course to a program, or change from credit to auditor's status in a course or vice versa.

Changes in registration cannot be effected by notifying the instructor of a given course. Students must appear at the Summer Session Office in order to make program changes official.

WITHDRAWAL FROM SUMMER SCHOOL

A student may arrange for withdrawal at any time by canceling his registration at the Summer Session Office, 117 Day Hall. In such cases the Treasurer may refund a part of the tuition and general fee or cancel a part of the obligation which the student has incurred for tuition, provided the reason for withdrawal is stated in writing and is satisfactory to the Treasurer and the Registrar. The student is required to pay 20 per cent of the term's tuition and general fee for each week or fraction of a week between the first registration day and the date of his certificate of withdrawal, unless the withdrawal is made by Friday, June 29.

TUITION AND FEES

Tuition and fees are due and payable at the Treasurer's Office in Day Hall on registration day, June 27. The last day for payment without penalty is Monday, July 2. A penalty of \$10 is charged if payment is made after that date. The Treasurer's Office closes at 4:30 p.m.

TUITION

Tuition is charged according to the number of credit hours for which the student is registered. The rate of tuition is \$35 per credit hour.

Teachers in accredited public and private schools and colleges may apply for tuition scholarships of \$10 per credit hour. Only those teachers not supported by grant funds or other comparable subsidy are eligible to apply. The privilege of tuition scholarships will be granted on the basis of formal application made to the Director of the Summer Session on forms provided on request. Applications must be submitted for action prior to registration.

FEES AND DEPOSITS

All students in the Summer School session will pay, in addition to tuition, a general fee of \$5 per week which entitles them to health and infirmary services (see page 12), administration services, and student union membership. Fees for laboratories, field trips, and incidental expenses are charged in certain courses and are indicated by asterisks in the course descriptions. A student who finds it necessary to register after the regular registration day must pay a \$10 late registration fee. A student who wishes to make a change in program after 4 p.m. on July 6 must pay a \$10 fee. *No change in program will be permitted after 4 p.m. on July 20.*

GRADUATE REGISTRATION DEPOSIT

A deposit of \$28 must be made by every applicant for admission to the Cornell Graduate School after the applicant has received notice of acceptance, unless the candidate has previously matriculated as a student at Cornell University. The deposit is used to pay the matriculation fee and covers certain expenses incidental to graduation if the student receives a degree. The deposit is not refundable.

OTHER REGULATIONS CONCERNING FEES

Any student, graduate or undergraduate, who fails to pay his tuition, fees, and other indebtedness, or, if entitled to free tuition fails to claim it at the Treasurer's Office and pay his fees within the time prescribed by the University, will be dropped from the University. When in his judgment the circumstances in a particular case so warrant, the Treasurer may allow an extension of time to complete payments. For such an extension, the student will be assessed a fee of \$5. A reinstatement fee of \$10 will be assessed any student who is permitted to continue or return to classes after being dropped from the University for default in payments. For reasons satisfactory to the Treasurer and the Registrar, which must be presented in writing, the latter assessment may be waived in any individual case.

The amount, time, and manner of payment of tuition, fees, or other charges may be changed at any time without notice.

FINANCIAL AID

Normally students registered in the Summer School are not eligible for University financial aid. In special cases, however, when the student applicant is a regular full-time student at Cornell and his Summer School program has the full approval of his faculty adviser, he will be considered for loan assistance.

There are no University scholarships for Summer School study except the tuition scholarship for teachers referred to under *Tuition* on page 7.

CASHING OF CHECKS

The Treasurer of the University accepts checks in settlement of charges payable at his office, but a rule of the Board of Trustees forbids him to cash any credit instrument, even to the extent of accepting a check or draft in amount greater than the sum due and returning the excess in cash. Students are therefore advised to open an account in an Ithaca bank as soon as they arrive in town, or else to provide themselves with travelers' checks, drafts on New York City banks, money orders, or other forms of credit instruments such as a bank will cash in the ordinary course of business.

VETERANS

Veterans who plan to study under Veterans Administration educational benefits during the Summer School should observe the following instructions.

Veterans enrolling for the first time under the educational benefits, or veterans whose last period of training was not at Cornell, must present a Certificate of Eligibility for the course of study they plan to pursue. Application for the certificate should be made to the local Veterans Administration Regional office, or, in the case of veterans who have had previous training, to the office where their records are located.

Veterans enrolled and using benefits at Cornell during the spring term, 1962, may use their benefits during the Summer School, providing there is no change of course or objective, by completing enrollment forms in the Treasurer's Office. Veterans making a change of course or objective must apply to the Veterans Administration for approval of the change. Application forms are available at the Treasurer's Office.

Veterans under *Public Law 894* must arrange for approval by the Veterans Administration prior to registration in the Summer School.

All questions concerning eligibility for Veterans Administration educational benefits should be directed to the nearest Veterans Administration Office.

THE GRADUATE SCHOOL

The Graduate School is an administrative unit entirely separate from the administration of the Summer School. *Only candidates for advanced degrees at Cornell University are registered in the Graduate School in the summertime.* Students who take course work at the graduate level in the Summer School, but who are not candidates for advanced degrees at Cornell University, have no connection with the Graduate School.

CREDIT FOR ADVANCED DEGREES

Summer School credits may be used for fulfillment of requirements for the following advanced degrees, under regulations of the faculty of the Graduate School: Master of Arts (M.A.); Master of Science (M.S.); Master of Science for Teachers (M.S.T.); Master of Arts for Teachers (M.A.T.); Master of Education (M.Ed.); Master of Industrial and Labor Relations (M.I.L.R.); Doctor of Education (Ed.D.); and Doctor of Philosophy (Ph.D.).

A program of six or more credit hours in the Summer School Session, approved in advance and reported as acceptable by the Special Committee, is counted as two-fifths of a residence unit, if the candidate has registered in both the Summer School and the Graduate School. Requirements for Masters' degrees may, upon approval of the field, be completed solely during the summer period if instruction in the chosen major and minor subjects is offered. Only two residence units (in exceptional instances, three) for study in the Summer School may be accepted in fulfillment of requirements for the doctorate. In order to help a student become acquainted with the School and faculty before entering candidacy, *the faculty allows the transfer of one Cornell Summer School of residence earned prior to admission to candidacy upon recommendation of the Special Committee and approval of the Dean.*

ADMISSION

Students intending to become candidates for advanced degrees at Cornell should write to the Dean of the Graduate School, 125 Day Hall, for application forms and for the *Announcement of the Graduate School*. Applications received before May 1 will be acted upon in time for the accepted candidate to register in the Graduate School on registration day, June 27. The Admissions Committee cannot give assurance that an application received after May 1 will receive the same consideration that it would receive if filed before this date.

REGISTRATION DEPOSIT

On admission to the Graduate School, the applicant is required to pay the sum of \$28 within twenty days of notification of admission, unless he has matriculated previously at Cornell (see also page 7.).

REGISTRATION

Students matriculated in the Graduate School must register in both the Summer School and the Graduate School. Full information and proper forms for registering in the Graduate School are to be obtained at the Graduate School table in Barton Hall on registration day. The registration must be completed within one week of registration day. To register, each candidate must file a Registration-of-Courses form, properly approved by his Special Committee. Each new candidate must file a Nomination-of-Committee form.

Such registration is regarded in the same fashion as registration for a regular semester and affects the deadlines for fulfillment of requirements.

Candidates registered in the Summer School who were not registered in the preceding spring term, but who expect to register in a succeeding regular term

10 SUMMER SCHOOL

(other than extramural) for continuation of their candidacy, must arrange with the Dean of the Graduate School for permission to register in the regular term.

COMPLETION OF REQUIREMENTS

Candidates for advanced degrees who expect to complete requirements and to take their final examinations at the end of the Summer School should call at the Office of the Graduate School not later than the third week of the session for the necessary instructions and forms.

CANDIDATES IN THE SCHOOL OF EDUCATION

Students interested in the degrees of Master of Education (M.Ed.), Master of Arts for Teachers (M.A.T.), or Doctor of Education (Ed.D.) should consult the *Announcement of the School of Education*, which may be obtained by writing to the Announcements Office, Day Hall. The faculty of the School of Education, functioning as a division of the faculty of the Graduate School, has special jurisdiction over these degrees.

HOUSING AND DINING

Rooms are available to both graduate and undergraduate men and women in University-operated housing units. A leaflet giving detailed information on housing, *Residential Halls for Men and Women*, will be mailed by the Office of the Summer Session after admission has been approved.

RESIDENTIAL HALLS

UNDERGRADUATE WOMEN

All undergraduate women, with the exception of those students whose homes are in Ithaca, are required under University policy to live and take their meals in a University dormitory. Prudence Risley Hall will be used for undergraduate housing, and there will be a uniform charge of \$184 for board and room for the Summer School period.

Rooms are furnished with desk, desk chair, desk lamp, bookcase, reading chair, chest of drawers, bed, bed linens (laundered by the University), blankets, and bedspread. Individual rooms are cleaned weekly, including replacement of bed linens. Daily bedmaking is the responsibility of the occupant.

There is a head resident in Prudence Risley Hall who, in cooperation with the counseling staff of the Office of the Dean of Students, is responsible for the conduct and social life of the students. The dormitory opens at 6 a.m. daily and closes at midnight Sunday through Thursday, and at 1 a.m. Friday and Saturday.

GRADUATE WOMEN

Graduate and special student women under twenty-one are required to live and take meals in the undergraduate dormitory unless special permission to make other arrangements is secured by written application to the Office of the

Dean of Students, 133 Day Hall. Graduate and special student women over twenty-one may make application for space in the graduate unit of Residential Halls or make arrangements to live off campus.

The rates for the Summer School period are \$66 for single and \$48 per person for double accommodations. For periods of three weeks or less the rates are \$12 single and \$9 double per person per week or part of a week. All rates cover the cost of room only. Rooms are completely furnished, including bed linen, with maid service provided Monday through Friday. There are no prescribed hours for the daily closing of the graduate dormitory.

MEN STUDENTS

Single and double rooms will be available to both undergraduate and graduate men. Rates for the Summer School period are \$66 for single and \$48 per person for double accommodations. For periods of three weeks or less the rates are \$12 single and \$9 double per person per week or part of a week. All rates cover the cost of room only. Rooms are completely furnished including bed linens, with maid service provided Monday through Friday.

Insofar as is practical, all men students are left to the regulation of their own affairs, subject to the University's general rules with regard to student conduct. There are no prescribed closing hours for men's dormitories.

OPENING-CLOSING DATES

All Residential Halls will open for occupancy Tuesday, June 26, at 3 p.m.; they will close at 2 p.m., Saturday, August 11. *Earlier or later occupancy will not be possible under any circumstances.*

APPLICATIONS FOR ROOMS

An application for a room assignment in Residential Halls cannot be given consideration unless it is submitted on an official application form to the Department of Residential Halls. Room application forms are distributed *only* by the Office of Summer Session and Extramural Courses *after* admission has been approved, and each student will automatically receive one with his Summer School registration coupons.

ASSIGNMENTS

Assignments for both men and women are made in order of receipt of application, and the earliest mailing date will be approximately May 15. Since requests for the Summer School period must take precedence over those for shorter periods, it may be impossible to forward actual assignments until ten days prior to short-course registrations.

ROOM DEPOSITS

A \$5 room deposit is required. A check or money order, drawn to the order of Cornell University, should be attached to the room application to insure prompt action. *This deposit is not applied on the residence charge* but is refundable, less any miscellaneous charges on the student's account. Refunds will

12 SUMMER SCHOOL

be made about September 15. This date applies even though the student terminates residence prior to the end of the Summer School.

Room deposits which accompany room applications will be refunded to those students who file with the Director of Residential Halls written intention to withdraw the application, provided such notice is received by June 15. *The deposit will not be refunded on cancellations received after June 15.*

OFF-CAMPUS AND MARRIED-STUDENT HOUSING

The Off-Campus Housing Office in Day Hall is maintained by the Department of Residential Halls. This office is a bureau of information only, maintaining files of voluntarily listed accommodations for the use of students who call at the office. Such lists cannot be mailed to prospective students.

Students wishing to sublet houses or apartments off campus, or married-student apartments operated by the University on campus, are advised to arrive in Ithaca in advance of registration in order to secure such quarters. Sublet rentals for the Summer School range from \$65 to \$175 a month.

There is normally an adequate supply of rooms available in off-campus locations for the Summer School. These rooms vary considerably in comfort, convenience, and safety. Before leasing a room careful consideration should be given such details as distance from campus and dining facilities, price, ventilation, sanitation, furnishings, and fire escapes. Arrival in Ithaca a few days in advance of registration will assure students of a better selection of off-campus rooms.

Information concerning married-student or off-campus accommodations will be mailed upon request. Address inquiries to the Department of Residential Halls, 223 Day Hall.

DINING SERVICES

The student union building, Willard Straight Hall, offers complete cafeteria and snack bar service as do Baker Cafeteria in University Hall I and Noyes Lodge on Beebe Lake. The College of Home Economics operates a cafeteria in Martha Van Rensselaer Hall, and the Department of Dairy Industry offers cafeteria and soda bar service in Stocking Hall. Meals obtained in these places, or in the cafeterias, dining rooms, and restaurants near the campus, will cost approximately \$2 to \$3 a day.

HEALTH SERVICES

The facilities of the students' medical clinic (Gannett Medical Clinic) are available to all students registered in the Summer School.

Clinic Hours

Monday through Friday	9 a.m.-4:30 p.m.
Saturday	9 a.m.-12 noon
Sunday	10-11 a.m.

(Physicians are not on duty from 12 noon until 2 p.m. A nurse will be in attendance during those hours.)

AFTER CLINIC HOURS

In the event of serious illness or accident when the Gannett Medical Clinic is closed, students may go directly to the Tompkins County Hospital, Trumansburg Road. This service is not intended for conditions that could have been treated at the Clinic during the regular Clinic hours noted above.

EMERGENCY SERVICE

A doctor is always available for calls of an emergency nature when an accident has occurred or when the student is too ill to come to the Clinic or the Hospital. (In the women's dormitories these calls should be made by the Head Resident whenever possible.) Telephone calls for this service should be made through the Medical Clinic, Ithaca AR 5-4082, when the Clinic is open, or Ithaca AR 2-6962 after Clinic hours. This service is not designed to care for students in their rooms. A charge of \$3 in the daytime and \$5 at night is made for these calls.

The Summer School health fee entitles students to the following services:

- (1) Unlimited visits to the Gannett Medical Clinic.
 - (2) Hospitalization with medical care for two days at the Tompkins County Hospital; a per diem charge, according to accommodations occupied, is made if hospitalization extends beyond two days.
 - (3) Emergency surgical care. This is defined as initial surgical procedures which are necessary for the immediate welfare and safety of the patient.
- If a student elects to consult a private physician, the cost of this service is not covered by the health fee.

COUNSELING SERVICES

INDIVIDUAL COUNSELING

The Office of the Dean of Students, 133 Day Hall, has a trained guidance and counseling staff to serve students in personal, educational, and social areas.

FOREIGN STUDENTS

The Foreign Student Office, 142 Day Hall, maintains a staff prepared to assist all students from other countries who may need information about living quarters, immigration matters, personal and social problems, or other questions.

LIBRARIES

The University libraries in Ithaca comprise the central University Library (the John M. Olin Library), the Mann Library of Agriculture and Home Economics, the Fine Arts Library, the Business and Public Administration Library, the Engineering Library, the Library of the School of Hotel Administration, the Library of the School of Industrial and Labor Relations, the Law Library, and

14 SUMMER SCHOOL

the Veterinary Library. In addition there are numerous departmental libraries in the separate schools and colleges.

The general collection of reference books and documents, the chief bibliographical publications, and the principal series of academy and learned society publications are located in the University Library. Specialized reference materials will be found in the various college and department libraries. The Reference Department of the University Library and the librarians of the college, school, and department libraries are prepared to assist students in the effective use of the libraries and in the location of research materials.

The total library resources on the Ithaca campus exceed 2,200,000 volumes. The number of periodicals, transactions, and other serials currently received is over 18,000.

In the course of their development the libraries have received and have built up special collections. Some of the most significant collections are the American Civil War, American History, Agriculture, Architecture, Botany, China, Dante, Dramatic Literature, Egyptology, English and French Revolutions, Entomology, Freemasonry, History of Science, History of Superstition, Icelandic, Legal Trials, Pascal, Petrarch, Reformation, Regional History, Rhaeto-Romanic, Slavery, Spinoza, and Zoology.

Presentation of Student's Official Summer Session Registration Certificate is required for borrowing books from the library. Cards of admission to the stacks are issued to graduate students for the purpose of consultation and research. Carrels and study spaces in the stacks are available to graduate students upon application. The privilege of borrowing books for home use is granted to all students who comply with the library regulations.

SPECIAL REGULATIONS

CONDUCT AND SCHOLARSHIP

The Summer School is administered under the general regulations governing conduct and scholarship which apply to all sessions of the University. Students are expected to familiarize themselves with dormitory and other rules and to abide by them. The Student Government rule concerning student conduct is:

"At all times and in all relationships a Cornell student should conduct himself in a decent and respectable manner. A Cornell student is expected to conduct himself in accordance with the obligation recognized by the student body of unfailing respect for the integrity of the individual and the best interests of the community."

Disciplinary cases are referred to the Faculty Committee on Student Conduct for appropriate action. A student may be removed from the University if, in the opinion of the Committee, such action is in the University's best interests.

AUTOMOBILE REGULATIONS

The University does not encourage student use of automobiles but recognizes that in certain cases there may be important reasons why a student needs an automobile. Any student who owns, maintains, or for his or her own benefit operates a motor vehicle in Tompkins County must do the following: (1) he must register the vehicle with the Traffic Bureau of the Safety Division at

the time of Summer School registration, or within 48 hours after bringing it to Tompkins County during the term; (2) he must pay a fee of \$1 and display, as directed, a registration sticker; (3) he must be legally qualified to operate a motor vehicle in New York State; (4) the vehicle must be registered in New York State or legally qualified to be operated on the highways of New York State; (5) the vehicle must be effectively insured against public liability for personal injury and property damage for the minimum of \$10,000-\$20,000-\$5,000.

Motorcycles and motor scooters must be registered but may not be used on campus during class hours. Trailers, as family units, are not allowed on any University property. Students may not park on campus from 8 a.m. to 5 p.m., Monday through Friday, and from 8 a.m. to 1 p.m., Saturday, and from two days prior to the day of registration to the last day of examinations during the Summer Session.

Each student registered for any program in the Summer Session is required to complete the Safety Division coupon at the time of registration whether or not he has a vehicle. This is essential for the general safety and welfare of the student. The Safety Division Office is the only office on campus open twenty-four hours a day to which inquiries, in the event of an emergency, can be directed when other sources of information are closed.

The student's registration in the University is held to constitute an agreement on his part that he will abide by its rules and regulations with regard to traffic and parking or suffer the penalty prescribed for any violation of them. All privileges here indicated may be denied a student who is not in good standing.

Suspension of the privilege of operating a motor vehicle may be enforced by requiring the student to deposit his registration plates and certificate and his driver's license with the Safety Division of the University during the period of such suspension. Refusal to comply with such a request may result in the student's suspension from the University.

THE WEEKLY CALENDAR AND ANNOUNCEMENTS

A weekly calendar, issued and posted on each Saturday of the Summer School, contains not only all official notices but details of public events and also news about special activities on the campus. Copies may be obtained without charge at the desk in Willard Straight Hall, at the Summer Session Office, in the Home Economics Cafeteria, and in Noyes Lodge. Students are advised to secure copies regularly.

EXTRACURRICULAR ACTIVITIES

The Summer Session, in cooperation with departments and agencies of the University, arranges a balanced extracurricular program of public events and recreation designed to enrich the campus experience of its students, especially those who are not at the University during the academic year.

WILLARD STRAIGHT HALL

The student union of Cornell University provides meal service, snacks for late afternoon and evening, lounges, rooms for student meetings, dancing, the University Theatre, a billiards and games room, a barber shop for men, a browsing library well stocked with books of general interest, a craftshop, a music room, and an art lounge. On the upper floors of the Hall are sleeping rooms used principally by parents and guests of students, by alumni, and by guests of the University.

In addition to regular meal service, the Willard Straight dining department is equipped to serve informal parties, teas, receptions, private luncheons and dinners, and barbecues, and to provide picnic box lunches.

The Main Desk is a focal point of campus information and services. Newspapers, current magazines, postcards, candy, and cigarettes, as well as tickets to many campus functions are available. The daily tours of the campus originate here. Travel information and road maps may be procured from the desk. A detailed calendar listing all events of the Summer School is published by Willard Straight Hall. Copies will be available at the Main Desk.

The Willard Straight Summer Student Committee arranges for informal talks, recorded music programs, recreational folk and square dancing, open houses, dances, games, art exhibits, and other recreation and entertainment. Membership on this committee is open to all students.

NOYES LODGE

Noyes Lodge, located on Beebe Lake, near the Balch Dormitories, is operated by Residential Halls and provides regular cafeteria service as well as snack service during the morning, afternoon, and evening hours. Space is also available for special luncheons and dinners and for social and recreational functions of all types.

CONCERTS

The Summer Session offers two series of concerts during the six weeks. A series of five Thursday evening concerts will present the Cornell University Trio, resident ensemble of the University, Rudolph Kremer, University Organist and harpsichordist, and Gustav Leonhardt, prominent Dutch organist and musicologist. In addition to these programs, members of the chamber music class and members of the faculty will participate in a series of informal Monday afternoon concerts.

SAGE CHAPEL

Religious services are conducted in Sage Chapel throughout the academic year by visiting clergymen of various denominations. A similar series is provided in the Chapel on six Sundays during the Summer School period, July 1-August 5, inclusive.

SUMMER SCHOOL CHOIR

Music for the Sage Chapel services is provided by the Summer School Choir directed by Rudolph Kremer, University Organist. The Choir rehearses in Sage

Chapel one evening each week, the dates to be announced. All students and other interested persons are invited to participate.

PUBLIC LECTURES

A varied program of lectures, open to students in the Summer School as well as to members of the University community at large, is a feature of the Summer Session.

SUMMER THEATRE

A program of informal laboratory performances, open to the public without charge, will be given from time to time during the session by regularly enrolled members of the classes in Speech and Drama and by other interested students. Details of tryouts will be announced in the various classes, and performance dates will appear in the weekly calendar.

FILMS

Noteworthy European and American films are presented by the University Theatre during the Summer School. Admission is charged.

ANDREW DICKSON WHITE MUSEUM OF ART

Cornell's White Art Museum houses the University art collections and presents loan exhibitions as well.

Recent summer exhibitions have included the Museum's permanent collection as well as outstanding loan exhibitions. The summer visitor to the Museum in 1962 will find major traditional and contemporary works from the collection and a loan exhibition of American art. Paintings by visiting instructors during the summer program will also be featured.

The Museum is open daily, except Monday, from 11 to 4; Sunday from 2:30 to 4:30.

SPORTS

Softball diamonds on Upper Alumni Field, tennis courts conveniently situated around the campus, and an 18-hole golf course on Warren Road are available for the use of Summer School students. A gorge at one end of Beebe Lake on the campus forms a natural swimming pool where two guards are on duty every day of the session from 1 to 6 p.m.

Private lessons in golf, tennis, and swimming, and an intramural softball league are sponsored by the Department of Physical Education and Athletics.

The gymnasium in Teagle Hall offers facilities to male students for basketball, volleyball, and general workouts Monday through Friday from 9 a.m. to 6 p.m. Presentation of Student's Official Summer Session Registration Certificate is required for admittance.

GRUMMAN SQUASH COURTS

Facilities for squash and handball are available daily to male students. Participants must furnish their own game equipment. Presentation of Student's Official Summer Session Registration Certificate is required for admittance.

18 SUMMER SCHOOL

SWIMMING

Opportunity will be available each week, on an evening to be announced, for both men and women to swim in the Teagle Hall pool. Students will be admitted upon presentation of Official Summer Session Registration Certificate. Swimmers will supply own swim suits (bathing caps optional). A towel may be obtained upon presentation of registration certificate.

INTRAMURAL SOFTBALL LEAGUE

Groups or individuals who wish to participate in softball competition should see Mr. Hanley W. Staley, Teagle Hall, AR 5-4065 or AR 2-8286.

PRIVATE LESSONS

The Department of Physical Education and Athletics sponsors private lessons in golf, tennis, and swimming.

TENNIS. Hours to be arranged. Call Mr. Charles McCord, AR 5-4320 or AR 2-8174.

GOLF. Hours to be arranged. Call Mr. George Hall at the University Golf Course, AR 5-3361.

SWIMMING. Hours to be arranged. See Mr. Hanley W. Staley at Beebe Lake, or call AR 5-4065 or AR 2-8286.

CURRICULUM

THE COURSES of instruction are listed under departmental headings arranged alphabetically with few exceptions. For offerings in particular subject fields consult the Index. Because of demands that may be placed upon the instructing staff, it may be necessary to substitute instructors for the ones named in the course descriptions. *The Director reserves the right to cancel any course for which, through unforeseen circumstances, satisfactory instruction cannot be provided.*

UNIT COURSES, more or less than six weeks in length, are indicated by a *u* following the course number, and their dates are given in the descriptions. (See page 7 for tuition charges.)

COURSES REQUIRING LABORATORY OR OTHER FEES are marked by asterisks.

CLASS SCHEDULES . . . In most courses of instruction, classes will meet five times a week, on each weekday except Saturday. Unless otherwise specified, all courses extend through the regular six-week session, June 27–August 10.

The hours of class meetings are specified in the description of each course. Courses carrying 2 credit hours meet daily for 50 minutes unless otherwise specified.

MEETING PLACES of courses are given in the course descriptions. Any changes in room assignments will be found in a supplementary announcement which will be distributed to students at the time of registration.

EXAMINATIONS . . . With a few exceptions, examinations will be held on Thursday, August 9, and Friday, August 10, at the hours indicated by the schedule below. The usual classrooms will be used unless a change is announced by the instructor. In courses in which no examination is to be given, an announcement to that effect will be made by the instructor; in such cases the last meeting of each course will be held in the examination period for that course.

Deviations from the following schedule are permitted only if all class members and the instructor agree on the change and if no student in the class has a conflict in time.

Examinations will be held as follows:

8 o'clock classes, Thursday at 8.

9 and 9:30 o'clock classes, Friday at 8.

10 o'clock classes, Thursday at 10:30.

11 and 11:30 o'clock classes, Thursday at 2.

12, 12:30, and 1 o'clock classes, Friday at 10:30.

1:40 and 2 o'clock classes, Friday at 2.

AGRICULTURAL EDUCATION

(See Other Programs, page 47.)

AGRICULTURAL ENGINEERING

(See Other Programs, page 48.)

ANTHROPOLOGY

(See Sociology, page 44.)

ART

DRAWING AND PAINTING

The 1962 Summer Session in Art will concentrate on a comparison of traditional and contemporary use of the human figure and landscape as subject matter in painting and drawing. Lectures and group criticism will supplement the regular studio course instruction.

Art 12. SPATIAL CONCEPTS IN FIGURE DRAWING AND PAINTING. (U,G) 3 hours credit. Open to all students. M T W Th F 8-9:50. Franklin 316. Mr. DALY.

A study of the use of the human figure in drawing and painting relative to the changing concept of space and form in art.

Art 14. PORTRAIT PAINTING. (U,G) 3 hours credit. Open to all students. M T W Th F 10-11:50. Franklin 216. Mr. EVETT.

Study of various models in a range of media including pencil, ink, and oil.

Art 16. SPATIAL CONCEPTS IN LANDSCAPE PAINTING. (U,G) 3 hours credit. Open to all students. M T W Th F 10-11:50. Franklin 316. Mr. DALY.

Studio and outdoor work dealing with the evolution of spatial and color theories in landscape painting.

Art 18. LANDSCAPE PAINTING IN WATER COLOR. (U,G) 3 hours credit. Open to all students. M T W Th F 8-9:50. Franklin 325. Mr. EVETT.

Improvisations and direct water-color painting from characteristic local landscape themes.

HISTORY AND APPRECIATION

Fine Arts 102. INTRODUCTION TO RENAISSANCE AND MODERN ART. (U,G) 3 hours credit. M T W Th F 11-12:15. Goldwin Smith 190. Mr. WAAGE.

A survey of the more important paintings and sculptures by the major artists in Europe and the United States from about A.D. 1400 to the present. Those artists will be treated who have proved to be the most pioneering and inventive and who therefore have had the greatest influence upon the subsequent course of art. The purpose is not only to make the student aware of this influence but, even more, to acquaint him with the individual styles of these masters so that he can identify their works upon sight. No practice of art is involved.

Fine Arts 507. TWENTIETH CENTURY ART. (U,G) 3 hours credit. M T W Th F 9:30-10:45. Goldwin Smith 24. Mr. WAAGE.

Modern art, primarily painting, from the Post-Impressionists to the present. An attempt is made to explain why the modern movement of art arose in the first place; then the course of its development is traced in the works of the more talented and influential artists. Since the period under study is much shorter, a more precise and thorough treatment of the individual styles of the artists and of the formal, or aesthetic qualities of their creations is possible than in Fine Arts 102. No art practice is involved.

BACTERIOLOGY

***Bact. 1. GENERAL BACTERIOLOGY.** (U,G) 5 hours credit. Prerequisite, a beginning course in chemistry. Lectures, M T W Th F 1:45-3.

Stocking 119. Laboratory, daily 3-5. Stocking 301. Mr. CONTI and assistant.

A general survey of the field of bacteriology,

with fundamentals essential to further work in the field as well as the application of the basic principles of bacteriology in agriculture, home economics, industry, and public health. Fee, \$10.

Bact. 2. GENERAL BACTERIOLOGY. (U, G) 3 hours credit. Lectures, M T W Th F 1:45-3. Stocking 119. Mr. CONTI.

The lecture of Course 1. Registration with permission of the instructor.

***Bact. 6. GENERAL BACTERIOLOGY LABORATORY.** (U, G) 2 hours credit. Prerequisite, a lecture course in introductory bacteriology. Laboratory, M T W Th F 3-5. Stocking 301. Mr. CONTI and assistant.

The laboratory part of Course 1. Fee, \$10.

BIOCHEMISTRY

Bioch. 101. GENERAL BIOCHEMISTRY. (U, G) 4 hours credit. Prerequisite, organic chemistry. Lectures, M T W Th F 8-10. Savage 100. Mr. KUNKEL.

A basic course dealing with the chemistry of biological substances and their transformations in living organisms.

***Bioch. 102. GENERAL BIOCHEMISTRY.**

(U, G) 2 hours credit. Prerequisite, quantitative analysis and, parallel, Course 101. Laboratory, M T W Th F 10-12:30. Savage 230. Mr. KUNKEL and assistant.

Laboratory practice with biochemical substances and experiments designed to illustrate chemical reactions which may occur in biological systems. Fee, \$20.

BIOLOGY

***Biology 105. LABORATORY METHODS IN BIOLOGY.** (U, G) 3 hours credit. Prerequisites, Biology 1-2, Botany 1-2, or Zoology 102 or 104 or their equivalents. Lecture and laboratory, M T W Th F 1:40-4:30. Roberts 302. Mr. UHLER.

For students who intend to teach or follow some phase of biology as a profession. Subjects covered: collection, preservation, and storage of materials; the preparation of bird

and mammal skins for study; injection of blood vessels and embalming; clearing and staining of small vertebrates; and the preparation and staining of smears, whole mounts, and sections. Fee, \$10.

Biology 307. RESEARCH IN BIOLOGY. (U, G) Credit and hours to be arranged. Prerequisite, adequate preparation and permission of the instructor.

BOTANY

***Bot. 1u. INTRODUCTORY BOTANY.** (U, G) 3 hours credit. *June 27 to July 20.* Lectures, M T W Th F 9 and 2. Plant Science 233. Laboratory, M T W Th F 10-12:30. Plant Science 240. Mr. GRIERSON and assistant.

Designed to give students an understanding of the growth and evolution of plants and their role in nature. Provides the basic knowledge necessary for those who intend to specialize in some aspect of plant science. Botany 1 is devoted to a study of growth in the flowering plants, with emphasis placed on structure, function, and reproduction. Fee, \$10.

Bot. 2u. INTRODUCTORY BOTANY. (U, G) 3 hours credit. *July 23 to August 10.* Lectures, M T W Th F 9 and 2. Plant Science 233. Laboratory, M T W Th F 10-12:30. Plant Science 240. Mr. GRIERSON and assistant.

Botany 2 is concerned with the phyla of plants, with representative life cycles, and with a consideration of the importance of various groups in the study of biological principles. The study of the evolution of the groups of plants is based on genetical and environmental mechanisms that control it. The classification and ecology of plants is introduced in several laboratory periods spent in the field. The scientific process, the growth of botanical knowledge, botanical principles and, particularly, the necessity of changing interpretations as new information is acquired are introduced throughout the course. Fee, \$10.

***Bot. 31. PLANT PHYSIOLOGY.** (U, G) 4 hours credit. Prerequisite, general botany or biology and elementary chemistry. Lectures, M T W Th F 9. Plant Science 141. Labora-

tory, daily 10-12:30. Plant Science 227. Mr. McDONOUGH.

Designed to acquaint the student with the important life processes of plants. Topics such as water-relations, photosynthesis, translocation, digestion, respiration, mineral nutrition, and growth relations are studied in some detail, and particular emphasis is placed, both in laboratory and in lectures, on discussion of the principles and their applications to living plants. Fee, \$8.

CHEMISTRY

***Chem. 105u. GENERAL CHEMISTRY.** (U) 3 hours credit. *June 27 to July 20.* Prerequisite, at least 2 units of mathematics. Lectures and recitations, M T W Th F 8-10. Baker 207. Laboratory, daily 10-1. Baker 150. Miss BOESCH and assistants.

For those students who intend to take more chemistry, this course serves as a prerequisite to more advanced courses. Secondary school chemistry is not a prerequisite. The course may also be elected by students who do not intend to take more chemistry. The important chemical principles and facts will be covered, with attention to the scientific method, the quantitative aspects and techniques which are important for further study of chemistry, and the relation of chemistry to the other fields of knowledge and to everyday life. Registration permitted only to students who register also for 106u. Texts: Sienko and Plane, *Chemistry*; Sienko and Plane, *Experimental Chemistry*. Fee, \$7.50.

***Chem. 106u. GENERAL CHEMISTRY.** (U) 3 hours credit. *July 23 to August 10.* Lectures and recitations, M T W Th F 8-10. Baker 207. Laboratory, daily 10-1. Baker 150. Miss BOESCH and assistants.

A continuation of Chemistry 105u. Chemistry 105u or its equivalent is prerequisite for Chemistry 106u. Fee, \$7.50.

***Chem. 201. INTRODUCTORY QUALITATIVE ANALYSIS.** (U,G) 4 hours credit. Prerequisite, general chemistry. Lectures, M T W Th F 8. Baker 7. Laboratory, M T W Th F any three hours daily between 9 and 1. Baker 50. Mr. REYNOLDS and assistant.

A study of the properties and reactions of the common elements and acid radicals and their detection in various solutions and solids. Text: King, *Qualitative Analysis and Electrolytic Solutions*. Fee, \$10.

***Chem. 224. INTRODUCTORY QUANTI-**

***Bot. 171. SPECIAL PROBLEMS IN BOTANY.** (U,G) 2 or more hours credit. Individual time of lectures and/or laboratories to be arranged. Members of the staff of the Department of Botany.

Students engaged in special problems or making special studies may register in this course with prior approval of staff member. Laboratory fee variable.

TATIVE ANALYSIS. (U,G) 4 hours credit. Prerequisite, qualitative analysis. For majors in chemistry and premedical students. Lectures, M T W Th F 8. Baker 206. Laboratory, M T W Th F any three hours daily between 9 and 1. Baker 252. Mr. GOLD and assistants.

A study of the fundamental theory and experimental techniques of gravimetric, volumetric, and colorimetric analysis, with practice in stoichiometry. Also, a brief survey of selected topics of modern analytical techniques. Text: Blaedel and Meloche, *Elementary Quantitative Analysis*. Fee, \$15.

Chem. 303. ELEMENTARY ORGANIC CHEMISTRY. (U,G) 4 hours credit. Prerequisite, general chemistry. Qualitative analysis is desirable but not required. Chemistry 305 must be taken with Chemistry 303. This combination satisfies the organic chemistry requirement of most medical schools, but the student should ascertain the entrance requirements for the particular medical schools to which he is applying. Lectures, M T W Th F 8-10. Baker 107. Mr. BOWEN.

An integrated study of aliphatic and aromatic organic compounds, their occurrence, methods of preparation, reactions, and uses. The relationship of organic chemistry to the biological sciences is stressed. Text: Hansch and Helmkamp, *Organic Chemistry, an Outline*.

***Chem. 305. ELEMENTARY ORGANIC LABORATORY.** (U,G) 2 hours credit. Prerequisite, general chemistry; qualitative analysis is desirable but not required. Must be taken with Chemistry 303. Laboratory, M T W Th F 10-12:30. Baker 250. Mr. BOWEN and assistants.

Laboratory experiments on the preparation and reactions of typical organic compounds. Text: Adams and Johnson, *Laboratory Experiments in Organic Chemistry*. Fee, \$15.

(See also Chemistry 401, page 49.)

CONSERVATION

Cons. 3. CONSERVATION OF NATURAL RESOURCES. (U,G) 2 hours credit. M T W Th F 9. Fernow 212 or 122. Messrs. HEWITT and HAMILTON.

The natural resource problems of the United States: soil, water, forests, wildlife, minerals, and recreational needs for an increasing population. River basin development, the conservation movement, public resource agencies and policies, current resource-use conflicts.

***Cons. 9. GENERAL ORNITHOLOGY.** (U,G) 3 hours credit. Lectures, M T W Th F 10. Fernow 210. Laboratory, M F 2-4:30. Fernow 210. Mr. SIBLEY and assistant.

Introduction to the biology of birds; their structure, classification, adaptations for flight, migration, distribution, behavior, ecology, and evolution. Field and laboratory work on identification of local species. Field studies will include two all-day field trips. Fee, \$3.

ECONOMICS

Econ. 103. MODERN ECONOMIC SOCIETY. (U) 3 hours credit. M T W Th F 11-12:15. Goldwin Smith 256. Mr. MONTGOMERY.

A survey of the existing economic order with particular emphasis on the salient characteristics of the modern American economy. The concentration is on explaining and evaluating the operation of the price system as it regulates production, distribution, and consumption, and as it is modified and influenced by private organizations and government policy.

Econ. 104. MODERN ECONOMIC SOCIETY. (U) 3 hours credit. M T W Th F 8-9:15. Goldwin Smith 256. Mr. STALLER.

Concentration on the determinants of aggregate economic activity. The main areas studied are the monetary and banking systems, the composition and fluctuations of national income, the major determinants of economic growth, all as influenced by monetary, fiscal, and other policies.

Econ. 206. AMERICAN ECONOMIC HISTORY. (U,G) 3 hours credit. M T W Th F 9:30-10:45. Goldwin Smith 264. Mr. DOWD.

An examination and analysis of significant processes and relationships in the economic development of the United States from the colonial period to the present.

Econ. 401. LABOR ECONOMICS, LABOR MOVEMENTS, AND GOVERNMENT LABOR POLICY. (U,G) 3 hours credit. M T W Th F 9:30-10:45. Goldwin Smith 242. Mr. MONTGOMERY.

An analytical and descriptive treatment of wage, employment, and other basic labor problems; a study of the policies, methods, and aims of organized labor; and an examination of the main components of American government policy toward labor.

Econ. 811. INTERMEDIATE ECONOMIC THEORY. (U,G) 3 hours credit. M T W Th F 9:30-10:45. Goldwin Smith 256. Mr. STALLER.

An analytical view of consumer demand and the pricing process in a free market economy under different competitive conditions. The role of the market in resource allocation and the distribution of income.

Econ. 825. BUSINESS CYCLES. (U,G) 3 hours credit. M T W Th F 11-12:15. Goldwin Smith 264. Mr. DOWD.

A study of the nature and causes of business recessions, revivals, and booms, and of recent business cycle history, together with a brief introduction to methods of current business analysis and forecasting.

EDUCATION

The School of Education presents the following program to serve public and private school personnel and other persons interested in professional preparation and improvement. The following visiting faculty members will augment the regular faculty of the School in teaching the courses offered in the Summer School and in other special programs.

Dr. RALPH C. BENDER, Head of the Department of Agricultural Education, Ohio State University.

Dr. CLYDE W. BRESEE, Director of Guidance, Athens Area High School, Athens, Pennsylvania.

Mrs. MARIAN EHRHART, former principal, Fall Creek School, Ithaca.

Dr. ARDEN FRANDSEN, Professor and Chairman of the Department of Psychology, Utah State University.

Dr. JOHN I. GREENE, Assistant Director, State School of Conservation, Branchville, New Jersey.
 Dr. HENRY L. ISAKSEN, Director of Pupil Personnel Services, Lexington Public Schools, Lexington, Massachusetts.

Miss MARIAN L'AMOREAUX, reading specialist on the staff of the Rochester Institute of Technology.

Dr. HAROLD E. MITZEL, Director of Research and Evaluation, Colleges of the City of New York, Division of Teacher Education.

Dr. HENRY PERKINSON, Assistant Professor of Education, Kent State University, Kent, Ohio.

ADMINISTRATION AND SUPERVISION

R.E. 261. THEORY AND PRACTICE OF ADMINISTRATION. (G) 3 hours credit. M T W Th F 8-9:15. 320 Wait Ave. Mr. McCARTY.

A basic course in the theory and processes common to a variety of administrative positions within the school system and elsewhere. Both the science and the art of administration are emphasized; theory is employed in group analysis of case studies.

R.E. 263. ELEMENTARY SCHOOL PRINCIPALSHIP. (G) 3 hours credit. M T W Th F 11-12:15. 320 Wait Ave. Mr. McCARTY.

Systematic treatment and discussion of the responsibilities of the elementary school principal in the administration of staff, pupils, finances, and plant.

R.E. 264. SCHOOL FINANCE AND FACILITIES. (G) 3 hours credit. M T W Th F 9:30-10:45. 320 Wait Ave. Mr. NUCCIO.

Typical problems: how local school funds are levied, collected, and disbursed; budget making; bonding; state funds and their distribution; planning, utilization, and upkeep of school facilities.

Ed. 267. SCHOOL LAW FOR ADMINISTRATORS AND TEACHERS. (G) 3 hours credit. M T W Th F 8-9:15. East Roberts 222. Mr. HIXON.

A study of school law with particular emphasis on New York State legislation, court decisions, opinions, and regulations which affect the schools of the state.

NINTH ANNUAL CONFERENCE FOR SCHOOL ADMINISTRATORS

The Ninth Annual Conference for School Administrators will be held during the fourth week of the Summer School, July 24-26, 1962. The theme of the conference is "Contributions of the Social Sciences to School Administration." Nationally known authorities from the fields of sociology, psychology, political science, and economics will participate in the three-day session.

For further information write to Vincent C.

Nuccio, Co-ordinator, 320 Wait Avenue, Cornell University, Ithaca, N. Y.

AGRICULTURAL EDUCATION

(See *Other Programs*, page 47.)

EDUCATIONAL PSYCHOLOGY AND MEASUREMENT

R.E. 117. PSYCHOLOGY OF ADOLESCENCE. (U,G) 2 hours credit. M T W Th F 10. Warren 37. Mr. RIPPLE.

Designed especially for secondary school teachers (grades 7-12) and guidance counselors, but is applicable to all adults who work with adolescents. The major objectives of the course include: (1) an examination of the interrelationships among the five major areas of an adolescent's development: physical, intellectual, moral, social, and emotional; (2) an understanding of some of the major problems of adolescence; (3) acquaintance with research on adolescent development; (4) implications for the public school as the one social institution which directly influences the development of the individual as a social personality.

This course applies toward the certification of secondary school teachers and guidance counselors.

R.E. 211. EDUCATIONAL PSYCHOLOGY. (U,G) 3 hours credit. Permission of instructor required. M T W Th F 11-12:15. Comstock 145. Mr. FRANDSEN.

Special emphasis will be given to the topics of learning, social organization of the classroom, and evaluation, and their relationship to the teacher's problems.

R.E. 251. EDUCATIONAL MEASUREMENT. (G) 3 hours credit. Prerequisite, a course in educational psychology or permission of instructor. M T W Th F 11-12:15. Warren 132. Mr. MITZEL.

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

R.E. 253. INTRODUCTION TO EDUCATIONAL STATISTICS. (G) 3 hours credit. M T W Th F 8-9:15. Comstock 145. Mr. MITZEL.

A study of common statistical procedures encountered in educational literature and research. Includes the computation and interpretation of descriptive measures and tests of significance.

Ed. 255. USE AND INTERPRETATION OF TESTS IN GUIDANCE AND PERSONNEL ADMINISTRATION. (G) 3 hours credit. Lectures, M T W Th F 8. Laboratory, 3 hours per week, to be arranged. Warren 132. Mr. ANDRUS.

Open to students in guidance or personnel administration and to classroom teachers who expect to work with standardized group tests. Deals with the historical development, use, and interpretation of aptitude tests as a basis for guidance and selection in public schools, colleges, and/or industry. Designed to meet the New York State certification requirement for guidance counselors.

R.E. 287. PRACTICUM IN MEASUREMENT AND APPRAISAL FOR COUNSELORS. (G) 2 hours credit. Prerequisites, R.E. 282, 283, 255 or their equivalents. M T W Th F 10. Stone 301. Mr. ANDRUS.

An advanced course in the use of tests and test results in the psychological appraisal of individuals. Emphasis will be placed upon analysis of testing programs, intensive examination of selected standardized tests, and laboratory experience in interpreting test results. Designed to meet the New York State permanent certification requirement for guidance counselors.

ELEMENTARY EDUCATION

Elementary education at Cornell is offered only at the graduate level. Students have a wide selection of courses during the Summer School in addition to courses designed to increase competence in elementary school teaching. (See offerings in biological sciences; the social sciences; government, history, sociology, anthropology; English; speech and drama; and the fine arts.) Teachers are also encouraged to select offerings in other divisions of the School of Education.

Courses in methods and materials designed specifically for the elementary school teacher are listed below.

R.E. 413. THE IMPROVEMENT OF READING INSTRUCTION IN THE ELEMENTARY SCHOOL. (G) 3 hours credit. M T W Th F 9:30-10:45. Warren 31. Mrs. EHRHART.

Open to experienced teachers, supervisors, and reading specialists or consultants.

Recent developments in research and the psychology of reading will be studied. Materials and techniques for instruction and diagnosis will be considered, with emphasis on developmental reading, comprehension skills, critical reading, and the communication process.

C.D.&F.R. 351. CHILDREN'S LITERATURE. (See page 36.)

C.D.&F.R. 314. PSYCHOLOGY OF ELEMENTARY SCHOOL CHILDREN. (See page 36.)

Music 109. MUSIC IN THE ELEMENTARY SCHOOL. (See page 42.)

Sp.&Dr. 231. SPEECH FOR THE CLASSROOM TEACHER. (See page 45.)

Sp.&Dr. 355. THE SPEECH-HANDICAPPED SCHOOL CHILD. (See page 45.)

EXTENSION EDUCATION

(See Other Programs, page 51.)

GUIDANCE AND PERSONNEL ADMINISTRATION

R.E. 282. EDUCATIONAL AND VOCATIONAL GUIDANCE. (G) 2 hours credit. M T W Th F 11. Warren 31. Mr. BRESEE.

An introductory survey course which deals with the theory and practice of guidance in public schools. Designed to meet the needs of teachers, administrators, and prospective counselors. Required for provisional certification in guidance.

R.E. 283. COUNSELING. (G) 2 hours credit. M T W Th F 9. Warren 132. Prerequisites, an introductory course in guidance and a course in psychological testing. Mr. BRESEE.

Principles and techniques of counseling with students concerning educational, vocational, and social adjustment problems. Primarily for teachers who wish to become certified as counselors.

R.E. 285. OCCUPATIONAL AND EDUCATIONAL INFORMATION. (G) 4 hours credit. M T W Th F 11. Additional hour arranged. Field trips and workshop periods, T and Th 2-4:15. Warren 37. Mr. ISAKSEN.

Survey and appraisal of occupations and educational institutions, study of sources of information used in counseling, job analysis, vocational trends. Field trips to places of employment.

R.E. 287. PRACTICUM IN MEASUREMENT AND APPRAISAL FOR COUNSELORS. (See

26 SUMMER SCHOOL

under Educational Psychology and Measurement.)

See also course offerings in Educational Psychology and Measurement, Child Development and Family Relationships, Mental Hygiene, and Psychology.

Guidance courses tentatively scheduled for the Summer Session of 1963: Educational and Vocational Guidance, Group Techniques in Guidance, Organization and Administration of Guidance Programs, Case Studies in Counseling.

HISTORY, PHILOSOPHY, AND SOCIAL FOUNDATIONS OF EDUCATION

Ed. 244. SYSTEMS OF PHILOSOPHY OF EDUCATION. (G;U by permission) 3 hours credit. M T W Th F 10-11:15. Warren 14. Mr. HIXON.

A critical consideration of the several schools of educational philosophy which are generally recognized as significant influences upon present-day education. This course may be used in partial fulfillment of New York State certification requirements.

R.E. 295. EDUCATION IN KEY COUNTRIES. (G;U by permission) 3 hours credit. M T W Th F 8-9:15. Warren 31. Mr. PERKINSON.

Educational purposes, systems, and practices of selected key countries will be compared to those in the United States. Variations will be related to economic conditions, social needs, and political aspirations. This course may be used as an elective in partial fulfillment of New York State certification requirements.

R.E. 297. HISTORY OF EDUCATION IN THE MODERN PERIOD. (G;U by permission) 3 hours credit. M T W Th F 8-9:15. Plant Science 37. Mr. PERKINSON.

A survey of education from the beginning of the seventeenth century to the present, with emphasis on public education and on policies and problems. This course may be used as an elective in partial fulfillment of New York State certification requirements.

HOME ECONOMICS EDUCATION

H.E. Ed. 403. SPECIAL PROBLEMS FOR GRADUATE STUDENTS. (G) Credit and hours to be arranged. Van Rensselaer East Wing 5. 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. (G) Credit and hours to be arranged. Registration with permission of the instructor. Van Rensselaer East Wing 5. Department staff.

***H.E. Ed. 435. METHODS AND MATERIALS IN TEACHING HOME ECONOMICS.** (G) 2 hours credit. Lectures, M T W Th F 8. Van Rensselaer East Wing 5. Mrs. CARMICHAEL.

Planned for experienced teachers of homemaking. Opportunity is given to study and experiment with a variety of teaching procedures and materials such as discussion, demonstration, laboratory, films, and recordings. Fee, \$2.

***H.E. Ed. 437u. ADULT EDUCATION.** (G) 3 hours credit. July 23 to August 10. M T W Th F 10-12:30. Van Rensselaer East Wing 5. Miss PATTERSON.

Planned for teachers, administrators, directors of adult education, extension agents, parent educators, and others.

Deals with principles and philosophy of adult education. Emphasis is placed on the scope, nature, and major problems in adult education; development and promotion of local programs; selection of teaching procedures and materials; appraisal of programs; and cooperative efforts of agencies. Provides opportunity for special study individually or with other students having similar interests. Fee, \$2.

***H.E. Ed. 456u. CURRENT DEVELOPMENTS AND HOME ECONOMICS EDUCATION.** (See Other Programs, page 50.)

READING AND STUDY SKILLS

(See Other Programs, page 51, and Secondary Education.)

RESEARCH AND GENERAL

R.E. 199. INFORMAL STUDY IN EDUCATION. (U) Credit as arranged. Members of the staff of the Department of Rural Education.

R.E. 276. THE CURRICULUM OF AMERICAN SCHOOLS. (G) 2 or 3 hours credit. M T W Th F 10 (additional time to be arranged for third hour of credit). East Roberts 223. Miss L'AMOREAUX.

A consideration of issues and questions affecting the curriculum of American schools, with emphasis on elementary and secondary schools, and with attention to such questions as establishing aims, meeting problems of organization

and sequence, selection of content materials, carrying on curriculum work, and appraisal of the curriculum. A chance will be afforded for work on curriculum problems or assignments of individual class members to earn the third hour of credit.

R.E. 299. EDUCATIONAL RESEARCH METHODS. (G) 2 hours credit. Recommended for Master's degree candidates. Alternates with R.E. 251. M T W Th F 10. Comstock 145. Mr. FRANDSEN.

Consideration of the basic research methods as applied to education and the principles of thesis writing.

R.E. 300. SPECIAL STUDIES IN EDUCATION. (G) Credit as arranged. Members of the staff of the Department of Rural Education.

Ed. 499. INFORMAL STUDIES IN EDUCATION. (U) Credit as arranged. Members of the staff of the School of Education.

Ed. 500. SPECIAL STUDIES IN EDUCATION. (G) Credit as arranged. Members of the staff of the School of Education.

Students working on theses or other research projects may register after consulting the staff members concerned.

SCIENCE EDUCATION

***R.E. 108. FIELD NATURAL HISTORY.** (U,G) 3 hours credit. Lectures, T W Th 1:30-3. Field Trips, T Th 3-5:20. Stone 7. Mr. GREENE.

Designed to assist and enrich the teaching of general science and biology; involves studies of local plants and animals, their ecology, and relations to humans. Extensive field work stresses the outdoors as a laboratory and teaching resource. This course may serve as an elective education course in the professional state requirements for science teachers. Fee, \$1.

SECONDARY EDUCATION

For students with a major interest in secondary school teaching, courses in secondary education as well as in teaching programs and techniques in the several fields will be offered. In addition, students are urged to carry supporting work in one of the teaching fields and in such fields as educational psychology, history, philosophy, and guidance.

Ed. 130E. THE TEACHING OF ENGLISH IN SECONDARY SCHOOLS. (U,G) 3 hours credit. M T W Th F 8-9:15. East Roberts 223. Miss L'AMOREAUX.

To meet teacher certification requirements and needs of experienced teachers. Study of content and material appropriate to the teaching of English will be emphasized.

Ed. 130M. THE TEACHING OF MATHEMATICS IN SECONDARY SCHOOLS. (U,G) 3 hours credit. M T W Th F 8-9:15. Warren 37. Mr. LINDLOF.

Offered for the inexperienced as well as the experienced high school mathematics teacher. Useful materials and practical methods for effective teaching of mathematics will be considered. Current research and proposals for curriculum revision will be treated. Special interests of students will serve as a guide for further selection of topics. The course is accepted for certification purposes.

R.E. 143. UNIFIED STUDIES IN THE SECONDARY SCHOOL. (U,G) 2 or 3 hours credit. Prerequisites: social and psychological foundations and a course in secondary school methods. T Th 2-4 and one hour to be arranged. Stone 310. Mr. VARS.

Explores the integration of two or more subject fields in block-time, unified studies, or core programs at the junior or senior high school level. Deals with rationale, status, and trends; curriculum framework; the guidance role of the block-time teacher, and teaching methods particularly appropriate for block-time programs, such as teacher-student planning, individual and small group work, functional teaching of basic skills, use of varied instructional resources, and student participation in evaluating progress. Also considers administrative problems, and the implications for block-time of such newer educational developments as the Trump proposals, educational television, and programed instruction.

The third hour of credit may be earned through an individual project approved by the instructor.

May be applied toward extending certification to another academic area, or toward the additional professional study required for permanent certification.

Ed. 315. READING AND STUDY SKILLS IN THE SECONDARY SCHOOLS. (U,G) 3 hours credit. M T W Th F 9:30-10:45. East Roberts 222. Mr. PAUK.

Designed for all teachers of the content subjects as well as for all administrators and supervisors. The psychology, philosophy, and pertinent research in developmental reading will be explored. Emphasis will be placed on demonstration and discussion of practical teaching methods and practice materials used in classroom teaching.

R.E. 391. JUNIOR HIGH SCHOOL EDUCATION. (U,G) 3 hours credit. M T W Th F 9:30-10:45. Stone 370. Mr. VARS.

Examines education programs for young adolescents in the light of history, status, and philosophy of the junior high school. Includes guidance, articulation, exploration; general education programs such as block-time, core; and such recent developments as auto-instruction and team teaching.

R.E. 394. SEMINAR IN JUNIOR HIGH SCHOOL EDUCATION. (G) 1 hour credit. W 12-2:15. Warren 14. Mr. M. JOHNSON, JR.

Open only to interns in the Junior High School Project.

Consideration of various approaches to the professional growth of teachers and the improvement of educational programs at the junior high school level.

ENGINEERING

CIVIL ENGINEERING

Engr. 2902. ENGINEERING LAW. (U) 3 hours credit. M T W Th F 8-9:15. Hollister 314. Mr. RICHARDS.

Basic features of laws and practices relating to contracts, torts, agency, property, water rights, forms of business organizations, sales, insurance, utilities, labor, government regulation of business, negotiable instruments, workmen's compensation, liens, bankruptcy, patents, copyrights, trademarks; work of the expert witness; ethical responsibilities; professional registration; special emphasis on contract documents used in construction work.

ENGINEERING INDUSTRIAL COOPERATIVE PROGRAM

(See Other Programs, page 48.)

ENGINEERING MECHANICS AND MATERIALS

Engr. 1151. ENGINEERING MECHANICS—STATICS. (U) 3 hours credit. Prerequisite, Physics 121 and parallel registration in Mathematics 163. M T W Th F 9:30-10:45. Thurston 303. Mr. ———.

Composition and resolution of forces; equilibrium of force systems, principle of virtual work, potential energy, stability, distributed forces, centroids, moments of inertia, hydrostatics; friction; elementary theory of structures, method of joints, sections; flexible cables; shear force and bending moment.

Engr. 1153. MECHANICS OF MATERIALS. (U) 3 hours credit. Prerequisite, 1151 or equivalent. Lecture and laboratory, M T W Th F 9:30-10:45. Thurston 304. Mr. ———.

Stress and strain, tension, compression and shear, generalized plane stress, and Mohr's circle; riveted and welded joints; bending and torsion in elastic and plastic ranges; deflections of beams; theories of failure; columns; energy methods and Castigliano's theorem.

Engr. 1155. APPLIED DIFFERENTIAL EQUATIONS. (U) 3 hours credit. Prerequisite, 1151 and Math. 163 or equivalent. M T W Th F 8-9:15. Thurston 305. Mr. ———.

Formulation and solution of engineering problems which involve the use of ordinary differential equations, Fourier Series, partial differential equations, and matrices. In addition to classical analytical methods, numerical methods are introduced.

ENGLISH LANGUAGE AND LITERATURE

Lit. 101. MASTERWORKS OF WESTERN LITERATURE. (U) 3 hours credit. M T W Th F 9:30-10:45. Goldwin Smith 283. Mr. DE MAN.

A study of epic, drama, lyric poetry, and prose fiction selected from the literature of the Western world: *Iliad*, Greek tragedies, *Aeneid*, *Book of Job*, *Divine Comedy*, *Tristan and Isult*, *Hamlet*.

Lit. 102. MASTERWORKS OF WESTERN LITERATURE. (U) 3 hours credit. May be taken concurrently with Literature 101. M T

W Th F 11-12:15. Goldwin Smith 283. Mr. DE MAN.

A study of epic, drama, lyric poetry, and prose fiction selected from the literature of the Western world: *Don Quixote*, *Paradise Lost*, Molière comedies, *Faust*, Keats's poems and letters, *Madame Bovary*, Chekhov plays and short stories, and Mann's short novels.

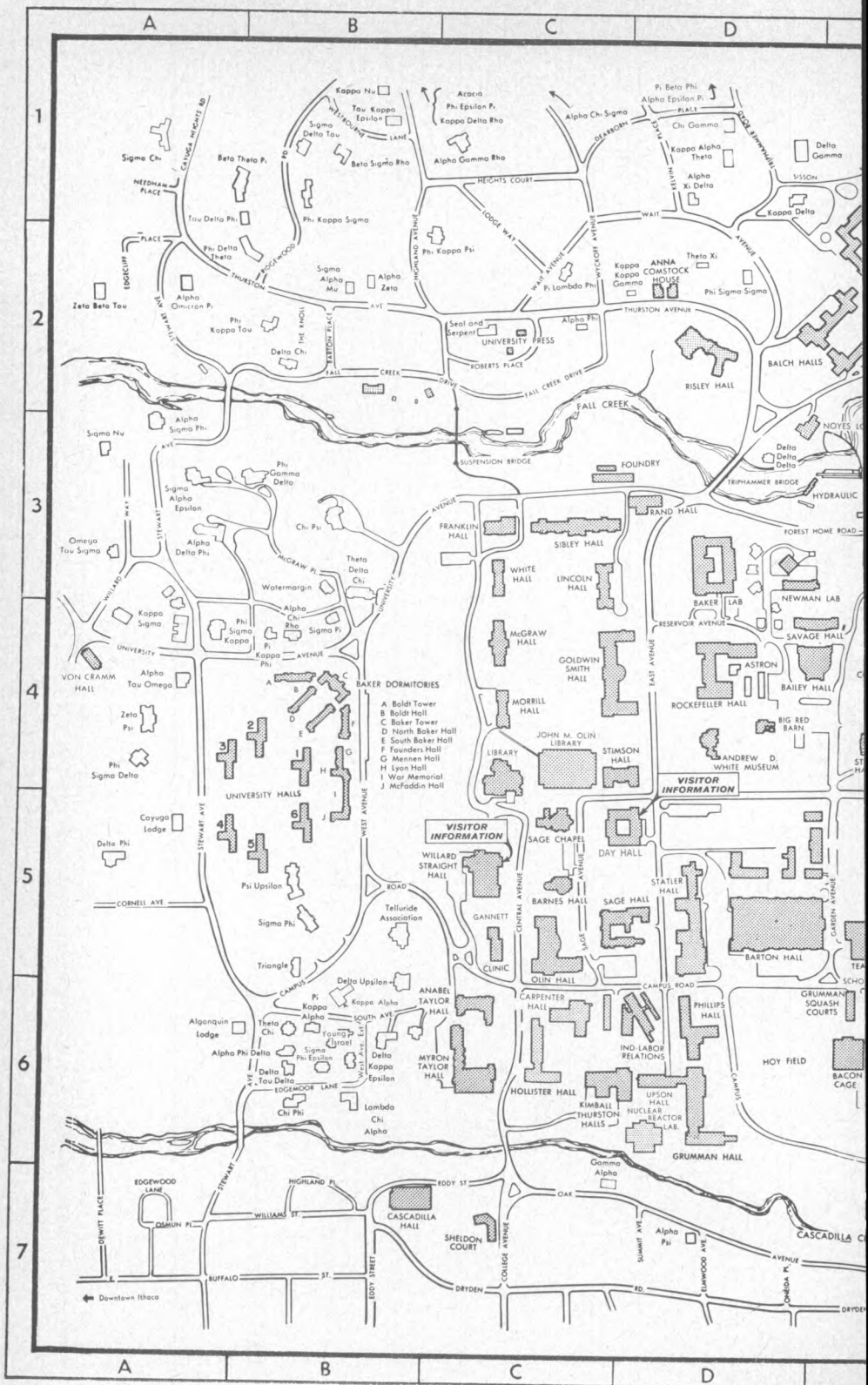
Engl. 251. GREAT ENGLISH WRITERS. (U) 3 hours credit. M T W Th F 8-9:15. Goldwin Smith 225. Mr. STOEHR.

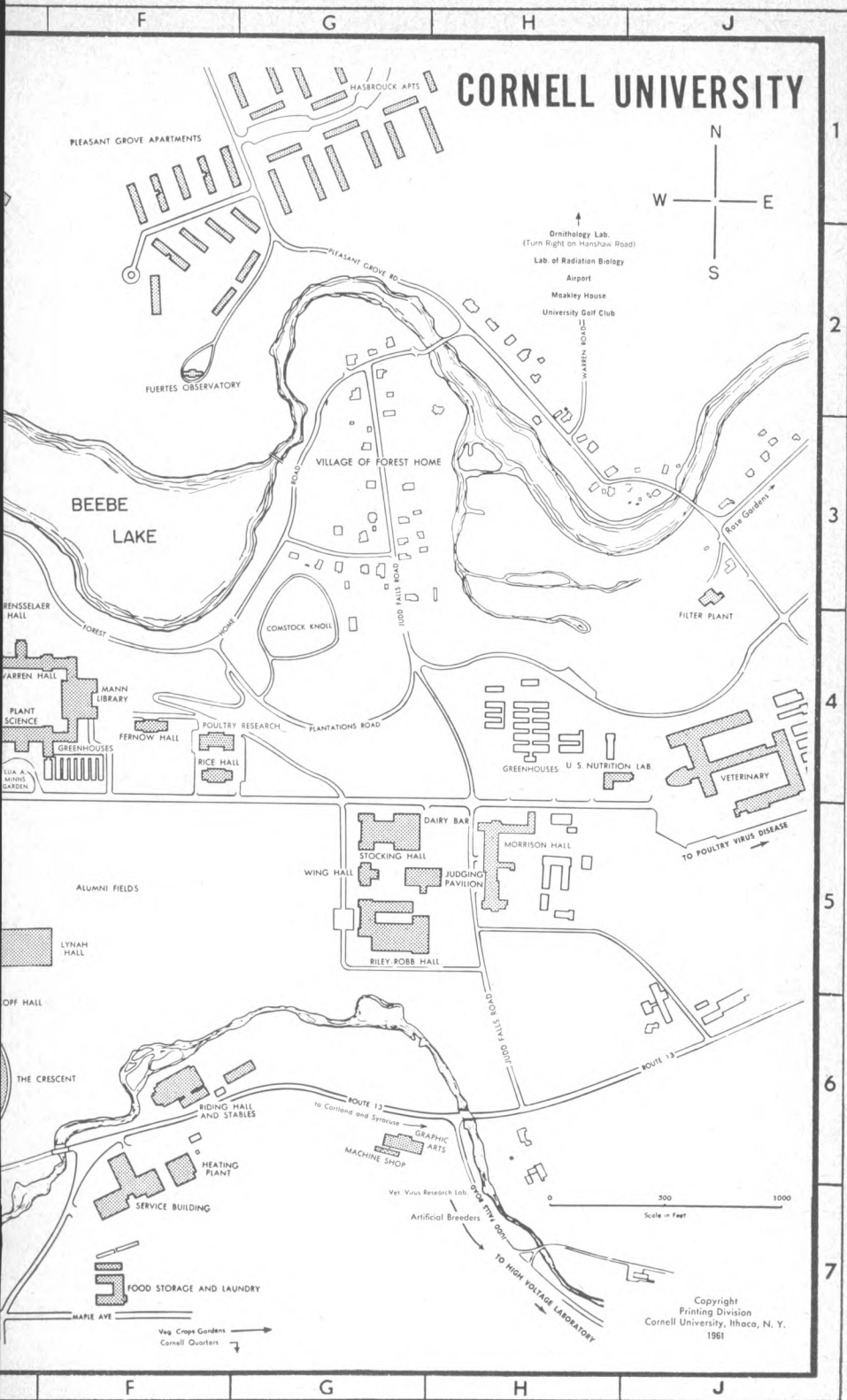
Studies in selected works of great English writers, Chaucer to the eighteenth century.

(Continued on page 32)

KEY TO THE CAMPUS MAP ON THE PAGES FOLLOWING

- Alumni (Athletic) Fields F5
 Anabel Taylor Hall C6, interfaith center
 Artificial Breeders H7
 Astronomy D4; Fuertes Observatory F2
 Bacon Athletics Cage E6
 Bailey Hall D4, auditorium
 Baker Dormitories B4, men's residences
 Baker Laboratory D3, chemistry
 Balch Halls E2, women's residences
 Barnes Hall C5, campus store, auditorium
 Barton Hall D5, military training
 Big Red Barn D4, alumni center
 Caldwell Hall E4, agronomy
 Campus Store C5, Barnes Hall
 Carpenter Hall C6, engineering library & administration
 Cascadilla Hall B7
 Clara Dickson Hall E1, women's residence
 Collyer Boat House, Cayuga Lake Inlet
 Comstock Hall E4, entomology, limnology
 Comstock House D2, women's residence
 Cornell Quarters G7, student families
 Crescent E6, football stadium
 Dairy Bar Cafeteria G5
 Day Hall C5, administration
 Fernow Hall F4, conservation
 Filter Plant J3
 Food Storage and Laundry F7
 Foundry D3
 Franklin Hall C3, Far Eastern Studies, art
 Gannett Medical Clinic C5
 Goldwin Smith Hall C4, arts and sciences
 Graphic Arts Services G6
 Greenhouses F4, H4
 Grumman D6, aero. engineering
 Grumman Squash Courts E6
 Hasbrouck Apts. G1, student residences
 Heating Plant F6
 High Voltage Lab. H7, 909 Mitchell St.
 Hollister Hall C6, civil engineering
 Hoy Field D6, baseball
 Hydraulic (Applied) Laboratory D3
 Industrial & Labor Relations D5
 Judging Pavilion H5
 Kimball and Thurston Halls C6, engineering mechanics & materials
 Library Clock Tower C4
 Lincoln Hall C3, music, speech & drama
 Lua A. Minns Garden E4
 Lynah Hall E5, ice skating
 Mann Library F4, agricultural-home economics library, regional history, Bailey Hortorium
 Mary Donlon Hall E1, women's residence
 McGraw Hall C4, geology; business & public administration
 Moakley House H2, recreation center, golf
 Morrill Hall C4, sociology, anthropology, modern languages, psychology
 Morrison Hall H5, animal husbandry
 Myron Taylor Hall C6, law
 Newman Laboratory D3, nuclear studies
 Noyes Lodge E2, recreation, cafeteria
 Nuclear Reactor Laboratory D6
 Olin Hall C5, chemical & metallurgical engineering
 Olin Library C4
 Ornithology, Sapsucker Woods Rd. via Warren & Hanshaw Rds. H1-2
 Phillips Hall D6, electrical engineering, radio-physics & space research
 Plant Science Building E4
 Pleasant Grove Apts. F1, student families
 Poultry Research F4
 Poultry Virus Disease Laboratory J5
 Radiation Biology Lab., Warren Rd. H1
 Rand Hall D3, hospital administration, Computing Center
 Rice Hall F4, poultry husbandry
 Riding Hall and Stables F6
 Riley-Robb Hall G5, agricultural engineering
 Risley Hall D2, women's residence
 Roberts Hall E4, agriculture administration
 Rockefeller Hall D4, physics
 Rose Gardens, road to, J3
 Sage Chapel C5
 Sage Hall D5, graduate center
 Savage Hall E3, nutrition
 Schoellkopf Field and Hall E6, athletics
 Service Building F7
 Sibley Hall C3, architecture, history, government
 Statler Hall D5, hotel administration
 Stimson Hall C4, zoology
 Stocking Hall G5, dairy & food science, bacteriology
 Stone Hall E4, education
 Suspension Bridge C3
 Teagle Hall E5, men's physical ed. & sports
 Thurston Hall (see Kimball)
 Triphammer Bridge D3
 University Halls B4, men's residences
 University Press, C2
 Upson Hall D6, mechanical engineering
 U. S. Nutrition Laboratory J4
 Van Rensselaer Hall E3, home economics
 Vegetable Gardens G7
 Veterinary College J4
 Veterinary Virus Research Laboratory H7
 Visitor Information C5
 von Cramm Scholarship Residence (men) A4
 Warren Hall E4, agricultural economics, rural sociology
 White Hall C3, mathematics
 White Museum of Art D4
 Willard Straight Hall C5, student union
 Wing Hall G5





(Continued from page 28)

Engl. 252. GREAT ENGLISH WRITERS. (U) 3 hours credit. M T W Th F 11-12:15. Goldwin Smith 225. Mr. DONOVAN.

Studies in selected works of great English writers, Wordsworth to the twentieth century.

Engl. 302. MODERN DRAMA. (U,G) 3 hours credit. M T W Th F 9:30-10:45. Goldwin Smith 225. Mr. FOGEL.

Studies in European and American drama from Henrik Ibsen to Arthur Miller.

Engl. 309. ELIZABETHAN LITERATURE. (U,G) 3 hours credit. M T W Th F 11-12:15. Goldwin Smith 128. Mr. FOGEL.

Studies in the literature of the English Renaissance, exclusive of the drama. Special emphasis on such writers as Wyatt, Sidney, Spenser, Marlowe, and Shakespeare.

Engl. 318. THE ROMANTIC POETS. (U,G) 3 hours credit. M T W Th F 11-12:15. Goldwin Smith 221. Mr. FERRIS.

A critical study of the chief poetry of Wordsworth, Coleridge, Byron, Shelley, and Keats.

Engl. 320. THE VICTORIAN NOVEL. (U,G) 3 hours credit. M T W Th F 1:30-2:45. Goldwin Smith 221. Mr. FERRIS.

A critical study of the chief novels and novelists of the period, from Dickens to the early Conrad. The novels will be: Dickens, *Bleak House*; George Eliot, *The Mill on the Floss* (both in Houghton-Mifflin Riverside editions); Thackeray, *Vanity Fair*; Charlotte Brontë, *Jane Eyre*; Emily Brontë, *Wuthering Heights*; Butler, *The Way of All Flesh*; Conrad, *Lord Jim*; Hardy, *The Mayor of Casterbridge*; Trollope, *Barchester Towers* (all in Rinehart editions).

Engl. 338. THE MODERN ENGLISH NOVEL. (U,G) 3 hours credit. M T W Th F 8-9:15. Goldwin Smith 227. Mr. DONOVAN.

A critical study of selected English novels from World War I to the present. Works to be read and recommended editions: Lawrence, *Sons and Lovers* (Signet); Joyce, *Portrait of the Artist as a Young Man* (Viking); Forster, *Howards End* (Vintage) and *A Passage to India* (Harcourt); Woolf, *To the Lighthouse* (Harcourt); Huxley, *Point Counter Point* (Avon); Waugh, *A Handful of Dust* and *Decline and Fall* (Dell double volume); Amis, *Lucky Jim* (Viking).

Engl. 342. ENGLISH DRAMATIC COMEDY. (U,G) 3 hours credit. M T W Th F 1:30-2:45. Goldwin Smith 236. Mr. SMITH.

The principal tradition of comedy in British drama, with emphasis on Shakespeare, Jonson, Congreve, and Shaw.

Engl. 343. THE SHORT STORY. (U,G) 3 hours credit. M T W Th F 8-9:15. Goldwin Smith 242. Mr. RAY.

The short story, with particular emphasis on the work of Chekhov, Hemingway, Mansfield, and Faulkner.

Engl. 369. SHAKESPEARE. (U,G) 3 hours credit. M T W Th F 9:30-10:45. Goldwin Smith 221. Mr. READ.

An introduction to the works of Shakespeare based on a study of 12 plays representative of the stages of his artistic development and the range of his achievement.

Engl. 382. THE ENGLISH LANGUAGE: STRUCTURE AND MEANING. (U,G) 3 hours credit. M T W Th F 11-12:15. Goldwin Smith 128. Mr. STOEHR.

An introductory survey of some major approaches to the study of English, with emphasis on contemporary views, e.g., general semantics, structural linguistics. Wide reading in numerous authorities: Bloomfield, Brown, Burke, Cassirer, Chase, Fries, Jakobson, Jespersen, Korzybski, Langer, Sapir, Whorf, etc.

Engl. 385. CREATIVE WRITING. (U,G) 3 hours credit. M T W Th F 1:30-2:45. Goldwin Smith 248. Mr. RAY.

Particular emphasis upon writing short stories and poetry, though other kinds of writing may be undertaken. Analysis of students' writing, study of models and trends, personal conferences.

Engl. 449. MODERN AMERICAN POETRY. (U,G) 3 hours credit. M T W Th F 9:30-10:45. Goldwin Smith 248. Mr. SMITH.

A critical consideration of major works by Frost, Pound, Eliot, Stevens, Crane, and others, with some special attention to recent work by younger poets.

Engl. 472. MILTON. (U,G) 3 hours credit. M T W Th F 11-12:15. Goldwin Smith 248. Mr. READ.

An intensive study of Milton's poetry and selected prose. Special attention will be given to *Paradise Lost* as the crown of Milton's development and achievement.

Engl. 920. SPECIAL TOPICS FOR INVESTIGATION. (G) Hours and credit to be arranged. Mr. PARRISH.

For graduate students engaged in writing the M.A. essay or Ph.D. dissertation. Informal reports and conferences.

(See also Foreign Languages and Literatures.)

FOREIGN LANGUAGES AND LITERATURES

High school students who have been admitted to a college for the coming academic year may take any language as undergraduate students. All students who have had no previous preparation in the language they elect will register for Course 101, except graduate students who may elect 151-2. Students who have taken previous course work in the language they elect will be placed in 101 or 102 on the basis of College Entrance Examination Achievement scores which they must make available before registration.

All modern language courses are equivalent to those offered in the academic year.

FRENCH

Fr. 101. FRENCH. (U) 6 hours credit. Students who have previously studied any French must take the qualifying examination before registering for this course. Twenty hours of instruction each week. Morrill Hall. Mr. LEONARD and staff.

Fr. 102. FRENCH. (U) 6 hours credit. Students who have not completed French 101 must take the qualifying examination before registering for this course. Twenty hours of instruction each week. Morrill Hall. Mr. LEONARD and staff.

Fr. 151u. FRENCH. (G) 3 hours credit. For graduate students acquiring reading proficiency. *June 27 through July 20.* Twenty hours of instruction each week. Morrill Hall. Mr. LEONARD and staff.

Fr. 152u. FRENCH. (G) 3 hours credit. For graduate students acquiring reading proficiency. Prerequisite, French 151, or one year of college French, or two years of high school French. *July 23 through August 10.* Twenty hours of instruction each week. Morrill Hall. Mr. LEONARD and staff.

Fr. 201. INTRODUCTION TO FRENCH LITERATURE. (U) 3 hours credit. Prerequisite, for Cornell undergraduates, satisfactory qualifying examination; for others, 4 years of high school French or consent of the instructor. M T W Th F 9:30-10:45. Goldwin Smith 281. Mr. GROSSVOGEL.

The object is to acquire a reading facility in French, while developing a critical appreciation of the literature. Some ten major poets and playwrights will be read, the works selected representing significant writings from the Middle Ages to the eighteenth century. Depending on the level of oral proficiency, the class will be conducted in part or entirely in French.

Fr. 202. INTRODUCTION TO FRENCH LITERATURE. (U) 3 hours credit. Prerequisite, for Cornell undergraduates, satisfactory qualifying examination; for others, 4 years of high school French or consent of the instructor.

May be taken concurrently with French 201. M T W Th F 11-12:15. Goldwin Smith 177. Mr. SEZNEC.

The object is to acquire a reading facility in French, while developing a critical appreciation of the literature. Some eight major novelists will be read, the works selected representing significant writings from the 17th century to the present. Depending on the level of oral proficiency, the class will be conducted in part or entirely in French.

Fr. 207. EXPLICATION DE TEXTE ET COMPOSITION. (U) 3 hours credit. Prerequisite, for Cornell undergraduates, French 204 or consent of instructor; for others, two years of college French or consent of instructor. M T W Th F 9:30-10:45. Goldwin Smith 177. Mr. SEZNEC.

The course will emphasize reading, through close textual analysis of selected literary texts, and writing, through translation and composition. The course will be conducted in French.

Fr. 323. THE EXISTENTIAL NOVEL. (U,G) 3 hours credit. Prerequisite, for Cornell undergraduates, French 212 or 302 or consent of instructor; for others, consent of instructor. M T W Th F 11-12:15. Goldwin Smith 281. Mr. GROSSVOGEL.

The major novels of Sartre and Camus as introduction to existentialism. Close readings of texts and class discussion.

GERMAN

Germ. 101. GERMAN. (U) 6 hours credit. Students who have previously studied any German must take the qualifying examination before registering for this course. Twenty hours of instruction each week. Morrill Hall. Mr. KUFNER and staff.

Germ. 102. GERMAN. (U) 6 hours credit. Students who have not completed German 101 must take the qualifying examination before registering for this course. Twenty hours of

34 SUMMER SCHOOL

instruction each week. Morrill Hall. Mr. KUFNER and staff.

Germ. 151u. GERMAN. (G) 3 hours credit. For graduate students acquiring reading proficiency. *June 27 through July 20.* Twenty hours of instruction each week. Morrill Hall. Mr. KUFNER and staff.

Germ. 152u. GERMAN. (G) 3 hours credit. For graduate students acquiring reading proficiency. Prerequisite, German 151 or one year of college German or two years of high school German. *July 23 through August 10.* Twenty hours of instruction each week. Morrill Hall. Mr. KUFNER and staff.

QUECHUA

Quechua. 111-112. QUECHUA. (U,G) 6 hours credit. Prerequisite, consent of instructor. Twenty hours of instruction each week. Morrill Hall. Mr. SOLÁ and staff.

RUSSIAN

Russ. 101. RUSSIAN. (U) 6 hours credit. Twenty hours of instruction each week. Morrill Hall. Mr. LEED and staff.

Russ. 151u. RUSSIAN. (G) 3 hours credit. For graduate students acquiring reading proficiency. *June 27 through July 20.* Twenty hours of instruction each week. Morrill Hall. Mr. LEED and staff.

Russ. 152u. RUSSIAN. (G) 3 hours credit. For graduate students acquiring reading proficiency. *July 23 through August 10.* Twenty hours of instruction each week. Morrill Hall. Mr. LEED and staff.

SPANISH

Span. 101. SPANISH. (U) 6 hours credit. Students who have previously studied any Spanish must take the qualifying examination before registering for this course. Twenty hours of instruction each week. Morrill Hall. Mr. SOLÁ and staff.

Span. 102. SPANISH. (U) 6 hours credit. Students who have not completed Spanish 101 must take the qualifying examination before registering for this course. Twenty hours of instruction each week. Morrill Hall. Mr. SOLÁ and staff.

Span. 201. INTERMEDIATE READING COURSE. (U) 3 hours credit. Prerequisite, for Cornell undergraduates, qualification in Spanish; for others, 4 years of high school Spanish or consent of the instructor. M T W Th F 8-9:15. Goldwin Smith 277. Mr. BANDERA.

Reading of texts of established literary quality. The purpose is double, to increase reading facility and knowledge of vocabulary and idiom, and to develop methods and habits of critical appreciation of foreign literature. The class discussion is conducted mainly in Spanish.

Span. 301. SURVEY OF SPANISH LITERATURE FROM THE CID TO THE 18th CENTURY. (U) 3 hours credit. Prerequisite, Spanish 201 or consent of the instructor. May be taken concurrently with Spanish 201. M T W Th F 11-12:15. Goldwin Smith 277. Mr. BANDERA.

Lectures in Spanish and classroom discussion of the major works of Spanish literature from the medieval period to the eighteenth century.

(See also *English Language and Literature*, page 28, and *Other Programs*, page 52.)

GEOLOGY

***Geol. 101u. GENERAL GEOLOGY.** (U) 3 hours credit. *June 27 to July 20.* Registration limited to 24 students and permitted only to students who register also for 102u. Lectures, M T W Th F 8-9:50. McGraw 150. Laboratory, M T W Th F 2-4:30. McGraw 265. Mr. BLOOM.

An introduction to the various branches of geologic science: mineralogic, lithologic, geomorphic, glacial, structural, historic, and economic. Field trips will be given during certain laboratory periods.

The area surrounding Ithaca abounds in the illustrations of geologic science used in the

field trips for which the summer period is particularly effective. Text: Gilluly, Waters, Woodford (second ed.), *Principles of Geology; Geology 101 Laboratory Manual*. Fee, \$10.

***Geol. 102u. GENERAL GEOLOGY.** (U) 3 hours credit. *July 23 to August 10.* Geology 101u or its equivalent is prerequisite for Geology 102u. Lectures, M T W Th F 8-9:50. McGraw 150. Laboratory, M T W Th F 2-4:30. McGraw 265. Mr. WELLS.

A continuation of Geology 101u. Text: Dunbar (second ed.), *Historical Geology; Geology 102 Laboratory Manual*. Fee, \$10.

GOVERNMENT

Gov. 101. AMERICAN GOVERNMENT. (U,G) 3 hours credit. Lectures, M T W Th F 9:30-10:45. West Sibley B1. Mr. McCONNELL.

A general introduction to American national government and politics. Emphasis will be placed on historical development, organization, powers, practical working, and problems of federalism.

Gov. 215. PRESSURE GROUPS IN AMERICAN POLITICS. (U,G) 3 hours credit. Lectures, M T W Th F 11-12:15. West Sibley B2. Mr. McCONNELL.

An examination of the role of interest groups in the making of public policy. Attention is given to the organization, techniques, and resources of various groups on the American political scene.

Gov. 321. HISTORY OF POLITICAL THEORY. (U,G) 3 hours credit. Lectures, M T W Th F 8-9:15. West Sibley 221. Mr. CHAPMAN.

An analysis of the major writings in the history of political thought from Plato to John Stuart Mill.

Gov. 327. SYSTEMATIC POLITICAL THEORY. (U,G) 3 hours credit. Lectures, M T W Th F 9:30-10:45. West Sibley 328. Mr. CHAPMAN.

An analysis of the logical structure of political theory, treating historically significant types of theory and basic trends of thought.

Gov. 341. THE POLITICS OF THE SOVIET

UNION. (U,G) 3 hours credit. Lectures, M T W Th F 8-9:15. West Sibley B2. Mr. FISCHER.

An introduction to the public life of the Soviet Union. Special attention will be paid to political training, organization, and communication, and the role of the Communist party of the Soviet Union.

Gov. 342. THE GOVERNMENT OF THE SOVIET UNION. (U,G) 3 hours credit. Lectures, M T W Th F 11-12:15. West Sibley B1. Mr. FISCHER.

A survey of the making and implementing of official Soviet policy. The course will include the history of the country's government.

Gov. 343. CHINESE GOVERNMENT AND POLITICS. (U,G) 3 hours credit. Prerequisites, 101, 102. Lectures, M T W Th F 8-9:15. West Sibley B1. Mr. LEWIS.

General introduction to the politics of modern China with particular emphasis on the political processes of the People's Republic of China.

Gov. 412. INTERNATIONAL RELATIONS. (U,G) 3 hours credit. Lectures, M T W Th F 9:30-10:45. West Sibley B2. Mr. LEWIS.

An analysis of the basic issues, concepts, contents, and methods which characterize relations among states. Ideological, legal, military, and economic elements which may contribute to harmony and dissent will be discussed in terms of both international society and national foreign policies. The over-all frame of reference will consist chiefly of theories, practices, and institutions developed in the last forty years.

HISTORY

Hist. 151. AMERICAN HISTORY TO 1865. (U) 3 hours credit. M T W Th F 11-12:15. West Sibley 101. Mr. LAFEBER.

A survey of American political, social, and economic history from the Colonial period through the Civil War.

Hist. 211. HISTORY OF GREECE. (U,G) 3 hours credit. M T W Th F 8-9:15. West Sibley 101. Mr. KAGAN.

A survey of ancient Greek history from the Minoan period to the Roman conquest. The course will be conducted by means of lectures and discussions and will require readings in the ancient sources.

Hist. 427. EUROPEAN HISTORY FROM

1815 to 1914. (U,G) 3 hours credit. M T W Th F 2-3:15. West Sibley 101. Mr. HAMILTON.

A survey of the major developments in European history during this period with special emphasis on the forces of change—industrialism, liberalism, nationalism, and socialism.

Hist. 519. BRITAIN IN THE NINETEENTH AND TWENTIETH CENTURIES. (U,G) 3 hours credit. M T W Th F 9:30-10:45. West Sibley 101. Mr. HAMILTON.

A survey of British history from the end of the Napoleonic Wars to the present with emphasis on the development of British industrialism, parliamentary democracy, and the modern welfare state.

Hist. 742. AMERICAN FOREIGN RELA-

TIONS, 1898 to 1945. (U,G) 3 hours credit. M T W Th F 8-9:15. West Sibley 328. Mr. LAFEBER.

A study of the formulation and application of American foreign policy from the Spanish-American War through World War II.

HOME ECONOMICS

CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS

C.D.&F.R. 115. THE DEVELOPMENT OF HUMAN BEHAVIOR. (U) 3 hours credit. M T W Th F 11-12:15. Van Rensselaer 117. Mr. SUGR.

The aim is to contribute to the beginning student's knowledge and understanding of human beings through a study of their development from infancy to adulthood. Attention is focused on the role of biological factors, interpersonal relationships, social structure, and cultural values in changing behavior and shaping the individual. Special emphasis is given to the practical and social implications of existing knowledge.

***C.D.&F.R. 314. PSYCHOLOGY OF THE ELEMENTARY SCHOOL CHILD.** (U,G) 3 hours credit. M T W Th F 9:30-10:45. Van Rensselaer 117. Mrs. MELVILLE.

The personal and social development of children 6-12 years old will be presented through lectures, discussions, and readings. Such topics as motor skills, problem solving abilities, over-and-under achievers, and peer relationships will be discussed in the light of current psychological research. Fee, \$2.

***C.D.&F.R. 351. CHILDREN'S LITERATURE.** (U,G) 3 hours credit. M T W Th F 8-9:15. Van Rensselaer 117. Miss REEVES.

Literature as a resource in the child's living. The relation of children's literature to world literature. Traditional and modern forms. Illustrations in children's books. The student is expected to read widely in the literature for children two to twelve years of age, to participate in a story-telling group, and to work intensively on a problem of her own selection. Fee, \$2.

***C.D.&F.R. 363. HUMAN RELATIONS IN THE FAMILY.** (U,G) 3 hours credit. M T W Th F 8-9:15. Van Rensselaer 124. Mrs. MELVILLE.

A consideration of the interpersonal relations in the family basic to an intelligent understanding of the attitudes and behavior of its members. Special attention will be given to husband-wife, parent-child, and sibling relationships, and to the interrelations of the

younger, middle, and older generations at successive stages in the family cycle. Fee, \$2.

***C.D.&F.R. 370. MARRIAGE.** (U,G) 3 hours credit. M T W Th F 11-12:15. Van Rensselaer 124. Mr. HUDSON.

Designed to acquaint the student with the growing body of scientific knowledge concerning marriage, the experiences that precede it, and the adjustments, satisfactions, and problems growing out of it. Such topics as the following will be discussed: emotional and social maturity and readiness for marriage, personality and social factors in marriage adjustment, sex life in marriage, pregnancy and parenthood, the married woman and outside employment, marital failure and divorce, sources of help for troubled marriages. Fee, \$2.

***C.D.&F.R. 403. SPECIAL PROBLEMS FOR GRADUATE STUDENTS.** (G) Credit and hours to be arranged. Department staff.

For graduate students recommended by their chairmen and approved by the head of the department and the instructor in charge for independent, advanced work. Fee dependent upon the nature of the problem.

***C.D.&F.R. 407. THESIS AND RESEARCH.** (G) Credit and hours to be arranged. Registration with permission of the student's chairman. Department staff. Fee dependent upon the nature of the problem.

***C.D.&F.R. 475. PERSONAL-SOCIAL RELATIONSHIPS OF ADOLESCENTS.** (U,G) 3 hours credit. M T W Th F 9:30-10:45. Van Rensselaer 124. Mr. HUDSON.

Intended to offer junior and senior high school teachers of marriage and family life subject matter the opportunity to broaden and deepen basic knowledge, to develop further fundamental skills and techniques in teaching, and to build curriculum materials appropriate to their particular situations. Among the topics considered are the contemporary American family; the family cycle and developmental task concepts; the goals of family life education; social relationships of young people—theories and practices; and a review of teaching methods, materials, and current research. Fee, \$2.

(See also *Other Programs*, page 50.)

FOOD AND NUTRITION

***F.&Ntr. 103. ELEMENTARY FOOD AND NUTRITION.** (U) 5 hours credit. Lectures, M T W Th F 9:30-10:45. Van Rensselaer 339. Laboratory, daily 11-1. Van Rensselaer 352. Miss STEININGER and Mrs. SHAFFER.

An introduction to the field of food and nutrition: the nutrients, their functions in maintaining health, their distribution in foods, and how they are affected by handling and processing. The laboratory includes a study of basic ingredients and techniques used in food preparation. Some meal preparation, stressing nutritive value and the management of money and time, is also included.

Planned for students who wish to explore the field of food and nutrition or to accelerate their undergraduate programs. The course will also meet the needs of persons who need "refresher work" in this area. Fee, \$8.

F.&Ntr. 104. ELEMENTARY NUTRITION. (U,G) 3 hours credit. M T W Th F 9:30-10:45. Van Rensselaer 339. Miss STEININGER.

An introduction to the field of human nutrition: the nutrients, their functions in maintaining health, their distribution in food, and how they are affected by handling and processing.

Basic nutrition information is utilized in many professional fields, in addition to home economics, among them elementary and health education, biology and general science teaching, and social work. Since nutrition subject matter is rapidly expanding, the course is also appropriate for professional workers with training in the field who wish to bring their information up-to-date.

***F.&Ntr. 105. BASIC FOOD PREPARATION.** (U) 3 hours credit. Prerequisite, a college course in elementary nutrition. Laboratory, daily 11-1. Van Rensselaer 352. Discussion, 2 hours to be arranged. Mrs. SHAFFER.

An introduction to the field of food: a study of basic ingredients and techniques used in food preparation with emphasis on theory. Some meal preparation, stressing nutritive value and the management of money and time, is also included.

Students interested in this field who do not have the required background in nutrition, should register for the 5 credit course, Food and Nutrition 103. Fee, \$8.

F.&Ntr. 330u. DIET THERAPY. (U,G) 3 hours credit. July 9 to 27. Prerequisite, a college course in normal nutrition, in biochemistry, and in physiology. Lecture-discussion,

M T W Th F 8:30-11. Van Rensselaer 301. Miss RIVERS.

Study of the physiological and biochemical anomalies in certain diseases and the principles underlying nutritional therapy. Independent survey of the technical literature in this field.

Planned for teachers and dietitians who wish to up-date their information in this area, and for students who are qualifying for a post-graduate internship approved by the American Dietetic Association.

***F.&Ntr. 403. SPECIAL PROBLEMS FOR GRADUATE STUDENTS.** (G) Credit and hours to be arranged. Open only to graduate students with a major or minor in the field of food and nutrition. Registration with permission of the student's chairman. Department staff.

Independent advanced work. Fee dependent upon the nature of the problem.

***F.&Ntr. 407. THESIS AND RESEARCH.** (G) Credit and hours to be arranged. Open only to graduate students with a major in the field of food and nutrition. Registration with permission of the student's chairman. Department staff.

Fee dependent upon the nature of the problem.

(See also Other Programs, page 50.)

HOME ECONOMICS EDUCATION

(See page 26 and Other Programs, page 50.)

HOUSEHOLD ECONOMICS AND MANAGEMENT

H.E.M. 320. MANAGEMENT IN RELATION TO HOUSEHOLD EQUIPMENT. (U,G) (For juniors, seniors, and graduate students only.) 3 hours credit. M T W Th F 2-4. Van Rensselaer G-19. Miss PURCHASE.

Selection, care, and use of household equipment. Relative advantages of various types of equipment in performing certain tasks. Luxury, convenience, and essential features of appliances for cooking, refrigeration, house cleaning, and laundering. Materials, design, cost, and performance of utensils. Cost and other comparisons in the safe and efficient use of electricity, gas, and other fuels for cooking, water heating, and refrigeration. One field trip.

This course will not be offered if fewer than 12 students enroll. Pre-application to register.

H.E.M. 330u. MANAGEMENT IN RELATION TO PERSONAL FINANCES. (U,G) 3

hours credit. *July 23 to August 10.* Open to juniors, seniors, and graduate students only. M T W Th F 8-9:30 and 1:30-3, remainder of time to be used in library and field work. Van Rensselaer 121. Miss WARREN.

Spending and saving considered both from the point of view of the average family and the individual family. A course in economics is recommended but not required as a prerequisite.

Topics will include: living costs, shopping practices, life insurance, health and medical care costs, family savings and investment plans.

***H.E.M. 403. SPECIAL PROBLEMS IN HOUSEHOLD ECONOMICS AND MANAGEMENT.** (G) Credit and hours to be arranged. Registration by permission. Department staff.

For graduate students recommended by their chairmen and approved by the head of the department and the instructor in charge for independent, advanced work. Fee will be dependent on the nature of the problem.

***H.E.M. 407. THESIS AND RESEARCH IN HOUSEHOLD ECONOMICS AND MANAGEMENT.** (G) Credit and hours to be arranged. Registration with permission of the instructor. Department staff. Fee will be dependent on the nature of the problem.

***H.E.M. 485u. THE ADVISER'S ROLE IN HOME MANAGEMENT RESIDENCE COURSES.** (G) 2 hours credit. *July 9 to 20.* Hours to be arranged. Van Rensselaer Apartment A. Miss DAVEY.

Designed to prepare faculty for the supervision of the home management residence course and to suggest ways of giving this type of experience where facilities and staff are limited. Attention will also be directed to the married student as a member of this class.

Persons wanting to take this course should direct inquiries to Miss Alice J. Davey, New York State College of Home Economics, Cornell University, Ithaca, N. Y. To insure a place in the course, a deposit of \$20 is required by June 1. A minimum of 10 students is required.

Students will live in the home management apartments. Fee, \$20 for room.

HOUSING AND DESIGN

Students and staff are cordially invited to visit the exhibit on display in the Housing and Design Art Gallery. The Gallery, located on the third floor of Van Rensselaer Hall (Room 317), is open Monday through Friday from 12 till 5.

***H.&D. 100. FUNDAMENTALS OF DESIGN.** (U) 2 hours credit. Lectures and laboratory, M T W Th F 10-12. Van Rensselaer 327. Mr. MILLICAN.

An exploration of the basic elements of design (volume, plane, line, texture, color, motion, light, etc.) through an analytical examination of their varied properties and qualities. Studio assignments are intended to develop consciousness of these elements and sensitivity in their use. The student is encouraged to develop his visual experience by investigating the vast possibilities in the organization of lines, planes, textures, and colors, and to exercise his intellectual curiosity in the search for universal principles of design. Fee, \$9.

***H.&D. 147. FUNDAMENTALS OF HOUSING.** (U) 2 hours credit. M T W Th F 8. Van Rensselaer 3 M 11. Mr. BOWER.

A general survey of housing designed to acquaint the student with contributions the house and its environment can make to individual and family living. The roles the home-maker plays in the housing process as consumer and citizen are examined in relation to such human factors as the family life cycle, socio-economic status, attitudes, and values. Consideration is given to the housing market and building industry, selecting and financing the home, the part played by various housing specialists in the housing process, problems of home ownership, the implementation and effects of current housing legislation, and future housing needs. Fee, \$9.

***H.&D. 240. HOUSE PLANNING.** (U) 3 hours credit. Prerequisite, H.D. 220. M T W Th F 2-5. Van Rensselaer 327. Mr. MILLICAN.

An introduction to house design. Drafting-room work consisting of plan and model studies of house and site. Lectures, discussion, required reading. Fee, \$13.50.

***H.&D. 319. CONTEMPORARY DESIGNERS.** (U,G) 3 hours credit. Lectures, M T W Th F 9:30-10:45. Van Rensselaer 317. Miss TRUE.

Analysis of works of selected contemporary designers, comparison of the purposes and philosophies which affect design form and expressive content. Artists' work chosen from painting, architecture, and related design fields to accent the interrelation of design in the various fields. Fee, \$13.50.

***H.&D. 348. HUMAN FACTORS IN HOUSING.** (U,G) 3 hours credit. Prerequisite, H.D. 147 or equivalent. Lectures, M T W Th F 11-12:15. Van Rensselaer 301. Mr. BOWER.

A critical analysis of the influence of such factors as family life cycle, socio-economic status, attitudes, values, and preferences on housing requirements. Special treatment of current problems, such as housing needs of the aged, low-income families, and certain ethnic groups. Fee, \$13.50.

***H.&D. 403. SPECIAL PROBLEMS FOR GRADUATE STUDENTS.** (G) Credit and hours to be arranged. Department staff.

For graduate students recommended by their chairmen and approved by the head of the department and the instructor in charge for independent, advanced work. Fee, \$4.50 per credit hour.

***H.&D. 447. FUNDAMENTALS OF HOUSING.** (G) 3 hours credit. Consult instructor prior to registration. M T W Th F 8-9:15. Van Rensselaer 3 M 11. Mr. BOWER. Graduate section of H.&D. 147. Fee, \$13.50.

TEXTILES AND CLOTHING

***T.&Clo. 210. DESIGN AND COLOR IN APPAREL.** (U,G) 3 hours credit. Prerequisites, an introductory course in textiles and a course in the principles of design. May be elected by students from other colleges in the University who are approved by the instructor. Registration limited to eighteen students. Pre-application to register is requested. M T W Th F 2-3:50. Van Rensselaer 216. Miss SHERLOCK.

Opportunity is provided for experiences which help the student to develop understanding of the basic concepts and principles of design and color as applied to apparel, understanding of the creative process in apparel design, and ability to help people with such problems of clothing selection as involve aesthetic judgment.

Included are such problems as the development of a design, solving the interrelated problems of design set by the materials and technical procedures, the writing of an essay based upon a library problem, and the giving of a lecture-demonstration in which an individual is helped to solve a specific clothing selection problem. Fee, \$5.

***T.&Clo. 215. APPAREL DESIGN: PATTERN MAKING.** (U,G) 3 hours credit. Prerequisites, an introductory course in textiles and a course in the principles of clothing construction. Registration limited to sixteen students. Pre-application to register is requested. M T W Th F 8-9:50. Van Rensselaer 217. Miss SPRATT.

Study of the principles of fitting and pattern making and their application to fabric and figures. Laboratory experiences involve testing of principles and application of principles to pattern making, design problems, and alteration problems of wearing apparel. Fee, \$5.

T.&Clo. 373. NEW DEVELOPMENTS AND TRENDS IN TEXTILES. (U,G) 1 hour credit. Prerequisite, a course in textiles or consent of instructor. Pre-application to register is requested. Lectures and discussion, M W F 11. Van Rensselaer 278. Miss STOUT.

For students with some knowledge of textiles who wish to bring themselves up-to-date on developments in the field, particularly those of current importance to consumers.

***T.&Clo. 375. TEXTILES: TESTING AND EVALUATION.** (U,G) 2 hours credit. Prerequisite, a course in textiles or equivalent; recommended parallel T.&Clo. 373. Registration limited to ten students; course will be offered for no fewer than four students. Pre-application to register is requested. T Th 11-12:50 and six additional hours per week to be arranged. Van Rensselaer 278. Miss STOUT.

A series of cooperative problems chiefly involving procedures for evaluating the physical properties of fabrics. Laboratory work includes use of various testing instruments and standard or approved test methods of the American Society for Testing Materials and the American Association of Textile Chemists and Colorists, as well as some experimental test methods. Research methods of analyzing and interpreting data, and of presenting reports. Fee, \$5.

T.&Clo. 390. SOCIO-ECONOMIC ASPECTS OF CLOTHING. (U,G) 2 hours credit. Prerequisites, elementary economics and sociology, or permission of the instructor. Pre-application to register is requested. Lectures and discussion, M T W Th F 10. Van Rensselaer 213. Mrs. BAUMGARTNER.

Factors influencing the production, distribution, and consumption of clothing; consumer behavior related to clothing, analyzed in terms of economic and sociological theory; clothing consumption as an expression of economic and social change.

***T.&Clo. 403. SPECIAL PROBLEMS IN TEXTILES AND CLOTHING.** (G) Credit and hours as arranged. Registration by permission. Department staff.

For graduate students recommended by their chairmen and approved by the department

head. Students to assume any expense involved unless otherwise previously arranged. Fee will be dependent upon the nature of the problem.

*T.&CLO. 407. **THESIS AND RESEARCH.** (G)

Credit and hours as arranged. Registration by permission. Department staff. Fee will be dependent upon the nature of the problem.

(See also *Other Programs*, page 50.)

HOTEL ADMINISTRATION

(See *Other Programs*, page 51.)

INDUSTRIAL AND LABOR RELATIONS

I.&L.R. 293. SURVEY OF INDUSTRIAL AND LABOR RELATIONS. (U,G) 3 hours credit. M T W Th F 8-9:15. —. Mr. —.

An analysis of the major problems in industrial and labor relations; labor union history, organization, and operation; employment practices; industrial and labor legislation and social security; personnel management and human relations in industry; collective bargaining; mediation and arbitration; the rights and responsibilities of employers and employees; the major governmental agencies concerned with industrial and labor relations.

I.&L.R. 461. PERSONNEL ADMINISTRATION IN SUPERVISION. (U,G) 3 hours credit. M T W Th F 9:30-10:45. —. Mr. WASMUTH.

A review of the personnel function in business and industry with emphasis on the personnel responsibilities of the line supervisor. Topics for discussion will include selecting, inducting, training, motivating, rating, and compensating employees; developing techniques for interviewing, adjusting complaints and grievances, and aiding in the solution of employee problems; understanding aspects of protective labor legislation, labor relations law, and social security affecting employees supervised; and maintaining adequate personnel records and reports. Selected readings, case studies, discussions, and problems.

I.&L.R. 499 and 699. SPECIAL STUDIES. Credit and hours to be arranged. Directed research in special problems. Available upon arrangements with individual faculty members in appropriate topics.

I.&L.R. 510. ECONOMIC AND SOCIAL STATISTICS. (G) 3 hours credit. Lectures, M T W Th F 10. Laboratory, two sessions each week. —. Mr. BLUMEN.

A nonmathematical course for graduate students in the social studies without previous training in statistical method. Emphasis will be placed on discussion of technical aspects of statistical analysis and on initiative in selecting and applying statistical methods to research problems. The subjects ordinarily covered will include analysis of frequency distribution, time series (including index numbers), regression and correlation analysis, and selected topics from the area of statistical inference.

SPECIAL NONCREDIT SEMINARS AND WORKSHOPS

In the summer of 1962 the School is again offering a series of one-week noncredit seminars and workshops. These units are designed for practitioners, and consequently each will give specific emphasis to an operational area in the field. A partial list of offerings follows: *Employee Communications*, *Community Relations for Business and Industry*, and *Industrial Training Techniques*.

A number of conferences and institutes will also be conducted by the School. A special announcement covering the summer program of the School, including details of cost and content, may be obtained by writing to the Coordinator of Special Programs, School of Industrial and Labor Relations, Cornell University, Ithaca, N. Y.

MATHEMATICS

Math. 161. ANALYTIC GEOMETRY AND CALCULUS. (U) 3 hours credit. Prerequisite, three years of college preparatory mathematics. M T W Th F 8-9:15. White B 29. Mr. SANWAL.

Plane analytic geometry through conics. Dif-

ferentiation and integration of polynomials with applications to rates, maxima, volumes, pressures, etc. Text: THOMAS, *Calculus and Analytic Geometry*.

Math. 162. ANALYTIC GEOMETRY AND

CALCULUS. (U) 3 hours credit. Prerequisite, Mathematics 161 or the equivalent. M T W Th F 9:30-10:45. White B 37 Mrs. FEIT.

Differentiation and integration of algebraic, trigonometric, logarithmic, and exponential functions with applications. Related topics, including polar coordinates, parametric equations. Text: THOMAS, *Calculus and Analytic Geometry*.

Math. 163. ANALYTIC GEOMETRY AND CALCULUS. (U) 3 hours credit. Prerequisite, Mathematics 162 or the equivalent. M T W Th F 11-12:15. White B 37. Mr. —.

Infinite series, solid analytic geometry, partial derivatives, multiple integrals. Text: THOMAS, *Calculus and Analytic Geometry*.

Math. 181-182. ANALYTIC GEOMETRY AND CALCULUS. (U) 6 hours credit. Prerequisite, a thorough knowledge of trigonometry and exceptional aptitude for mathematics. M T W Th F 9-10:45 and 2-3:15. White B 15. Mr. AGNEW.

Emphasis on the mastery and techniques needed for further preparation in the sciences, including engineering and advanced mathematics. Consists of plane analytic geometry through conics; differentiation and integration

of polynomials with applications to rates, maxima, volumes, pressures, etc.; differentiation and integration of algebraic, trigonometric, logarithmic, and exponential functions, with applications. Related topics include polar coordinates, parametric equations, and vectors. Text: Agnew, *Calculus*.

Math. 241. INTRODUCTION TO MODERN MATHEMATICS. (U,G) 3 hours credit. Prerequisite, Mathematics 182. M T W Th F 9:30-10:45. White B29. Mr. SANWAL.

Primarily for undergraduates, particularly for prospective teachers and those with a cultural interest in mathematics. Set theory, logic, axiom systems, the real number field, other simple algebraic structures, cardinal numbers.

Math. 501. ADVANCED CALCULUS. (U,G) 3 hours credit. Prerequisite, Mathematics 163 or the equivalent. M T W Th F 11-12:15. White B 25. Mrs. FEIT.

Treats the logical foundations of elementary calculus. Topics include the construction of the real number system, limits, continuity, the derivative and its properties, the mean value theorem. If time permits, an introduction to Riemann integration will be given.

(See also *Engineering 1155*, page 28, and *Mathematics 613*, page 50.)

MENTAL HEALTH

Prev. Med. 1. PRINCIPLES AND PRACTICES IN MENTAL HEALTH. (U,G) 3 hours credit. Lectures, M T W Th F 10. Laboratory, T 2-4:30 and additional hours to be arranged. Phillips Hall 317. Dr. WALDMAN.

Deals with some basic concepts of emotional adjustment, mental health, and illnesses. The more common behavioral and emotional disorders; current policies and practices with regard to referral, diagnosis, and treatment; the role of the teacher and parent in promoting mental health. Emphasis is on attitudes

and procedures related to adjustment problems in the school and community. Laboratory sessions will include mental health films and plays for educational purposes. Visits to various agencies dealing with mental health problems will be arranged at the mutual convenience of the students and the instructor. Attendance at these meetings is required.

Credit in this course may be applied toward the provisional certificate for guidance counselors.

MUSIC

The Summer School of Cornell University will introduce a new program for composers for the summer session of 1962. This program will provide opportunities for serious professional composers as well as students in composition who have had some previous experience. The course of study will emphasize intensive work in composition combined with weekly sessions during which works will be read in various stages of completion with public performance as the ultimate aim.

The chamber music program which was introduced last summer will be continued under the direction of the Cornell University Trio, resident ensemble of the University (Daniel Eller, piano; Sheldon Kurland, violin; John Hsu, cello). The purpose of this program is to encourage instrumentalists from all walks of life to participate in music-making at Cornell during the summer. Less advanced players will be able to have private instruction to enable them to take part in informal chamber music sessions. Advanced instrumentalists and stu-

42 SUMMER SCHOOL

dents pursuing careers as performers will be given opportunities to perform in public concerts as well as in informal programs, both in chamber music and solo capacities. Members of the Trio will coach those preparing for public appearances.

Music 101. THE ART OF MUSIC. (U,G) 3 hours credit. M T W Th F 9:30-10:45. Lincoln 321. Mr. KREMER.

An approach to the understanding and rational enjoyment of the art of music. Offered especially for students who have had no technical training in the subject. Most of the outside work consists of listening to phonograph records.

Music 109. MUSIC IN THE ELEMENTARY SCHOOL. (U,G) 3 hours credit. M T W Th F 8-9:15. Lincoln 309. Mr. CAMPBELL.

Designed for elementary teachers who are required to teach music with or without the assistance of the music supervisor. Includes survey of literature, rote singing, sight reading and part singing, elementary theory and appreciation, and simple piano accompaniment.

Music 172. MUSIC THEORY. (U) 3 hours credit. M T W Th F 11-12:15. Lincoln 321. Mr. PALMER.

A study of the fundamental techniques of music, emphasizing the recognition of intervals, scales, triads, and keys. There will be rhythmic, harmonic, and melodic dictation and sight singing. The simpler melodic and harmonic techniques will be studied through writing and analysis. The ability to sing on pitch reasonably well is important and some experience with either playing or singing is desirable.

***Music 401. INDIVIDUAL INSTRUCTION.** Without credit. Stringed instruments and piano. One-hour lesson weekly (or two half-hours). Members of the resident Trio (violin and viola, Mr. KURLAND; violoncello, Mr. Hsu; piano, Mr. ELLER).

Applicants for this course should indicate the instrument to be played.

Fee for one-hour lesson weekly, \$45. Fees for a practice schedule of twelve hours weekly: \$10 for a practice room with piano; \$5 for a practice room without piano. Fees for a practice schedule of six hours weekly: \$5 for a practice room with piano; \$2.50 for a practice room without piano.

Music 403. CHAMBER MUSIC ENSEMBLE. (U,G) 1 hour credit. Consent of the instructor required. T F 2-3:15. Lincoln B 22. Members of the resident Trio (Messrs. Hsu, KURLAND, and ELLER).

Applicants for this course should indicate the instrument to be played.

An informal study and reading of chamber music for strings, woodwinds, and piano. Advanced instrumentalists will be given the opportunity to perform in public concerts.

Music 572. SEMINAR AND WORKSHOP IN COMPOSITION. (U,G) 3 hours credit. M W F 2-4:15. Lincoln 321. Mr. PALMER assisted by Messrs. ELLER, KURLAND, and Hsu.

A concentrated study of composition for students with some previous experience who wish to hear what they write performed while the work is in progress. Students will be expected to decide on a plan of work to be completed during the six-week period. A public concert of the works written during the course will be the goal of the summer's work. Some analysis of contemporary music through scores and recordings will be included, and the possibilities of various instruments will be demonstrated by the resident professional players. One of the largest collections of contemporary scores and recordings in the country, in the Cornell Music Department library, will be at the disposal of the class.

Music 574u. SEMINAR AND WORKSHOP IN COMPOSITION. (U,G) 2 hours credit. June 27 to July 27. M W F 2-4:15. Lincoln B 22 and 321. Mr. PALMER.

Music 576u. SEMINAR AND WORKSHOP IN COMPOSITION. (U,G) 2 hours credit. July 11 to August 10. M W F 2-4:15. Lincoln B 22 and 321. Mr. PALMER.

The two courses above are similar to 572 but with a program of work which can be completed in the space of four weeks. There will be a concert of works finished during the course. All opportunities open to those enrolled in 572 will be available to those in 574u and 576u.

PHILOSOPHY

Phil. 101. PHILOSOPHICAL CLASSICS. (U) 3 hours credit. Lectures, M T W Th F 9:30-10:45. Goldwin Smith 227. Mrs. LAZEROWITZ.

A study of several fundamental problems in

ethics, philosophical theology, theory of knowledge. Readings in Plato, G. E. Moore, Descartes, Locke, Hume.

Phil. 305. RATIONALISM AND EMPIRI-

CISM. (U) 3 hours credit. Lectures, M T W Th F 11-12:15. Goldwin Smith 227. Mr. LAZEROWITZ.

An investigation of the foundations of rationalism and empiricism, and an assessment of the major claims of these two traditions.

PHYSICS

***Physics 101. TOPICS IN PRESENT-DAY PHYSICS.** (U,G) 3 hours credit. (Graduate credit limited to secondary school teachers in the sciences who already have Bachelors' degrees. Prerequisites, 3 units of college-preparatory mathematics and a year-course in either college or high school physics. M T W Th F 10-11:50. One two-hour lecture per week (usually on Mondays), one two-hour class meeting on each of three days of the week, and one meeting a week (usually Wednesdays) either for additional lectures or to view pertinent instructional movies. Lectures and movies in Rockefeller B. Messrs. PARRATT and EDWARDS. The weekly Monday lecture, on a selected topic of current active interest in physics, is given by a mature teacher who has specialized in both the teaching and the research of the topic he discusses. Generally there are a different lecturer and a different topic each week. Demonstration experiments accompany the lecture. Prepared lecture notes are given to each student before each lecture so as to minimize the note-taking by the student during the lecture. These notes, in greater detail than the lecture, serve as a guide for the week's work.

Typical topics are: relativity, elementary particles, wave-particle duality, gravity, low-temperature physics, X-ray diffraction and the solid state, mass spectrometry, high-energy accelerators, physics of the upper atmosphere including the aurora, radio-astronomy, cosmology, etc. Some attempt is made to have an early topic introduce material that is assumed to be understood in later topics.

Typical lecturers are Professors H. A. BETHE, T. GOLD, K. I. GREISEN, J. OREAR, R. L. SPROULL, P. MORRISON, B. D. MCDANIEL, L. G. PARRATT, E. E. SALPETER, R. R. WILSON, etc.

Except for the common Monday lectures and for the Wednesday lectures or movies, students are subdivided into class-study groups according to interests, background preparation, etc. If the enrollment justifies, at least four different group levels will be formed. Each group, limited in size to about 15 students, has its own instructor who makes reading and problem assignments, leads the classroom discussion, gives examinations, and is in charge of his group for the entire 6 weeks. The work of each group is designed to increase the students' comprehension of the Monday topic (and of relevant matters, including the movies). At the instructor's discretion the group may anticipate

the Monday lecture by taking up pertinent background material before the lecture.

Emphasis is placed on the relatively few fundamental principles and concepts underlying all topics in physics, e.g., the conservation of energy and of momentum, the dual wave-particle nature of radiation and matter, the probabilistic nature of science, the resort to experiment as the final arbiter of the reliability of a theory, etc.

Three credit hours of 101 and 3 of Physics 109 will satisfy the requirements of the College of Arts and Sciences at Cornell for the "group requirement," viz., a 6-hour course of a natural science.

Physics 101 is not the equivalent of Physics 121, 201, or 207 of the academic year; however, students who have done very well in 3 credit hours of 101 and 3 of 109 may proceed directly into Physics 303 and 310 by passing the advanced-placement examination. Fee, \$5.

***Physics 109. GENERAL PHYSICS LABORATORY.** (U,G) 1 to 3 hours credit. (Graduate credit limited to secondary school teachers in the sciences who already have Bachelors' degrees.) Prerequisites, 3 units of college-preparatory mathematics and a year-course in either college or high school physics. Laboratory, M T W Th F 2-4:30. Rockefeller 364. Mr. EDWARDS.

Emphasis is placed on "open-ended" experiments. Students are encouraged to work individually with a minimum of supervision. Experiments are available in each of several fields and are assigned to fit the student's interests and background preparation. Fee, \$5 per credit hour.

***Physics 122. INTRODUCTORY ANALYTICAL PHYSICS II.** (U) 3 hours credit. Prerequisite, Physics 121 and calculus or simultaneous registration in Mathematics 162. Lectures, T Th 8-9:15. Rockefeller A. Recitations, M W F 8-9:15. Rockefeller 103. Laboratory, T Th 2-4:30. Rockefeller 252. Mr. NEWHALL.

Kinetic theory of gases, mechanics of gases, introductory thermodynamics. Electrostatic phenomena and introduction to electric circuits. The laboratory work consists of measurements in mechanics and in geometrical optics. Fee, \$5.

(See also Physics 314 and 323, page 50.)

PSYCHOLOGY

Psych. 101. INTRODUCTION TO PSYCHOLOGY. (U) 3 hours credit. M T W Th F 8-9:15. Morrill 340. Mr. PICK.

An introduction to the scientific study of behavior and experience, covering such topics as perception, motivation, emotion, learning, and the higher thought processes, personality, and individual differences.

Psych. 107. INTRODUCTION TO PERSONALITY AND SOCIAL PSYCHOLOGY. (U) 3 hours credit. M T W Th F 9:30-10:45. Morrill 340. Mr. MELTZER.

The scientific study of personality and its development, and of human social behavior. Such topics as traits, attitudes, personality structure, socialization, prejudice, conformity, and the development of stable interpersonal relationships will be analyzed. Credit in this course may be counted toward permanent certification for guidance counselors.

Psych. 116. PSYCHOLOGY OF HUMAN

LEARNING. (U,G) 3 hours credit. Prerequisite, an elementary course in psychology. Lectures, M T W Th F 11. Laboratory hours to be arranged. Morrill 340. Mr. ZIMMERMANN.

The fundamental conditions and principles of human learning with particular reference to academic learning. Discussion of recent developments in the automation of teaching methods. Part of the laboratory will be devoted to the comparison of teaching and learning techniques and the development of teaching programs.

Psych. 209. INTRODUCTION TO GROUP DYNAMICS. (U,G) 3 hours credit. Lectures, M T W Th F 1. Laboratory hours to be arranged. Morrill 340. Mr. MELTZER.

Lectures and laboratory experience in the experimental study of human behavior in groups. Application of techniques of group observation and analysis to such topics as group morale, leadership, group goals, and effective committee meetings.

SOCIOLOGY, ANTHROPOLOGY, AND RURAL SOCIOLOGY

Soc. 101. INTRODUCTION TO AMERICAN SOCIETY. (U,G) 3 hours credit. M T W Th F 11-12:15. Morrill 240. Mr. WILLIAMS.

Application of sociological concepts and principles to analysis of basic social structures and trends in the United States. Emphasis is placed on major institutions: family, social stratification, education, religion, and social aspects of economic and political organization. Special treatment of changing values and of groups and associations.

Anth. 111. MAN AND CULTURE. (U,G) 3 hours credit. M T W Th F 8-9:15. Goldwin Smith 124. Mr. GIBBS.

An introduction to cultural anthropology. Similarities and differences in the organization of human behavior in a variety of cultures, including social, economic, and political relations, and perception, thought, feeling, and expression in language, the arts, and religion; cultural systems and group personality types; processes involved in changing cultures; applications of anthropology in the world today. Materials from non-Western cultures and civilizations give the student working in the social sciences or humanities some cultural perspective on the problems of his own and other complex civilizations.

R.Soc. 112. COMMUNITY RELATIONS IN CHANGING RURAL-URBAN SOCIETIES. (U,G) 3 hours credit. M T W Th F 8-9:15. Warren 232. Mr. KOLB.

Factors which bring about changes; the trends and processes which are involved. The changes within, as well as surrounding, communities in the United States and other countries and their implications for those responsible for institutions and agencies in communities, such as school teachers, school administrators, county agents, farm organization leaders, religious leaders, civic leaders of youth groups, and city, town, and county government officials.

Anth. 204. CULTURE AND PERSONALITY. (U,G) 3 hours credit. M T W Th F 11-12:15. Goldwin Smith 124. Mr. GIBBS.

A study of the individual in his society, emphasizing the relationship between social structure, cultural context, and human behavior. Attention is given largely to the study of personality, "normal" and "abnormal," in non-Western societies.

R.Soc. 219. SCHOOL-COMMUNITY RELATIONS. (U,G) 3 hours credit. M T W Th F 11-12:15. Warren 232. Mr. KOLB.

The relations of school with family, formal and informal organizations, government and civic agencies, other social institutions, and "the public" within communities. The power-structure, value-orientation, and decision-making processes in community systems and how these factors influence schools and their related social institutions.

R.Soc. 250. SPECIAL PROBLEMS. (G) Credit and hours to be arranged. Permission of staff member who will supervise the study required.

SPEECH AND DRAMA

Sp.&Dr. 190. DIRECTED STUDY IN SPEECH AND DRAMA. (U,G) Credit and hours to be arranged. Open to undergraduates and graduates prepared for advanced studies in speech or drama and theatre. Permission of the instructors required for registration. Messrs. ARNOLD and ALBRIGHT.

Individual and informal seminar study of special topics concerning theory, history, or criticism of dramatic or rhetorical communication. Each student will be assigned to an adviser according to his special interest and, with the adviser's consent, will select a program of directed reading and research to be pursued individually or in collaboration with others.

Sp.&Dr. 201. PUBLIC SPEAKING. (U) 3 hours credit. M T W Th F 11-12:15. Lincoln Hall 204. Mr. SCHEIDEL.

Designed to help the student communicate his ideas and convictions effectively in oral discourse. Study of basic principles of expository and persuasive speaking with emphasis on finding, evaluating, and organizing materials, and on simplicity and directness in style and delivery. Practice in preparing and delivering speeches of various types on current issues; study of examples; conferences.

Sp.&Dr. 231. SPEECH FOR THE CLASS-ROOM TEACHER. (U,G) 3 hours credit. M T W Th F 8-9:15. Lincoln Hall 204. Mr. SCHEIDEL.

Designed to help teachers in elementary and secondary schools improve command of the speech skills and forms of communication they constantly use: oral exposition, group discussion, reading aloud, public speaking. Study of principles; constant practice; conferences on individual needs.

Sp.&Dr. 355. THE SPEECH-HANDICAPPED SCHOOL CHILD. (U,G) 3 hours credit. M T W Th F 11-12:15. Lincoln Hall 304. Mr. CANTER.

Soc. 506. INTERGROUP RELATIONS. (U,G) 3 hours credit. M T W Th F 8-9:15. Morrill 240. Mr. WILLIAMS.

Identification and analysis of groups or social units (age, race, class, ethnic, language, religious, caste, regional, kin, etc.) in society; and the consideration of the problems in inter-group relations, prejudice, integration, accommodation, and national unity to which they give rise.

A survey of the common types of speech disorders, their incidence, causes, and implications for therapy. The speech disorders of school-age children will be emphasized.

Sp.&Dr. 365. SEMINAR IN SPEECH PATHOLOGY. (U,G) 3 hours credit. Permission of the instructor required for registration. M T W Th F 9:30-10:45. Lincoln Hall 305. Mr. CANTER.

Advanced study of selected topics in speech pathology. Aphasia and related language disturbances will be studied.

Sp.&Dr. 403. METHODS IN PLAY PRODUCTION. (U,G) 3 hours credit. M T W Th F 9:30-10:45. Lincoln Hall 201. Mr. ALBRIGHT.

Principles and standard practice in play production, with emphasis on directorial viewpoints and objectives. Special attention to problems of organization, play selection, casting, and producing in school and community. Students matriculated for a degree in Cornell University may offer this course as equivalent of Speech and Drama 401.

Sp.&Dr. 421. DRAMATIC INTERPRETATION. (U,G) 3 hours credit. M T W Th F 11-12:15. Lincoln Hall 201. Mr. WINGATE.

An introductory course in acting; analysis and performance of varied types of dramatic prose and poetry; study of speech and action as adapted to the stage, with special attention to characterization. Opportunities for public performance.

Sp.&Dr. 457. MODERN AMERICAN DRAMA AND THEATRE. (U,G) 3 hours credit. M T W Th F 8-9:15. Lincoln Hall 302. Mr. WINGATE.

The development of the American theatre in its varied forms and the appreciation of its native drama with emphasis on representative plays and playwrights since 1900. Special consideration will be given to the works of

O'Neill, Williams, and Miller. Students matriculated for a degree at Cornell University may offer this course as equivalent of Speech and Drama 455.

SUMMER THEATRE. Open to students enrolled in classes in speech and drama and to other interested students. Public performances will be offered. Mrs. KLEIN. No credit.

ZOOLOGY

***Zool. 103u. GENERAL ZOOLOGY.** (U) 3 hours credit. *June 27 to July 20.* Lectures, M T W Th F 9 and 11. Stimson G25. Laboratory, M T W Th F 1-3:20. Stimson 102. Mr. MARKS and assistant.

A survey of the animal kingdom, observations and dissection of representative species, beginning with single-cell organs up to vertebrate animals. Text: Storer and Usinger, *General Zoology*. Fee, \$7.50.

***Zool. 104u. GENERAL ZOOLOGY.** (U) 3 hours credit. *July 23 to August 10.* Prerequisite,

Zoology 103u or its equivalent. Lectures, M T W Th F 9 and 11. Stimson G25. Laboratory, M T W Th F 1-3:20. Stimson 102. Mr. MARKS and assistant.

A continuation of Zoology 103u. Emphasis placed on the biology of the vertebrate animals, including references to man. Various zoological principles such as evolution, development and genetics will be considered. Text: Storer and Usinger, *General Zoology*. Fee, \$7.50.

These courses serve as a prerequisite to advanced zoological studies.

OTHER PROGRAMS OF THE SUMMER SESSION

The following programs are offered during the Summer Session period, June 11 to approximately September 15. Some occur during the period of the Summer School session, June 27 to August 10. Note the dates scheduled for each program.

AGRICULTURAL EDUCATION JULY 9-27

Three-week unit courses are being made available to teachers of agriculture in technical agriculture and agricultural education. These courses may apply toward a Master of Education degree and/or to a teaching certificate. The three-week courses provide the opportunity for professional improvement without taking extended leaves of absence from positions.

Graduate credit earned in three-week unit courses may be applied toward the residence requirement for only the Master of Education degree at Cornell. Students desiring to become candidates for this degree should register also in the Graduate School.

Registration for the three-week session will take place July 9, 1962, at a time and place to be announced.

For further information, address Professor C. W. Hill, 204 Stone Hall, Cornell University, Ithaca, N.Y.

Ag. Ec. 151u. PUBLIC PROBLEMS OF AGRICULTURE. (U,G) 2 hours credit. M T W Th F 8-9:30 and Wednesday 1-3:30. Warren 160. Mr. ROBINSON.

A review of current public problems facing agriculture and an analysis of existing and proposed government policies. Farm price supports and alternative methods of maintaining or raising farm prices and incomes are given special attention. Other topics discussed include conservation, credit, research, and education programs.

***Ag.Eng. 143u. FARM WELDING.** (U,G) 2 hours credit. Lectures, M T W Th F 10-11:50. Laboratory, T Th 1-4. Riley-Robb 60, 64. Mr. LECHNER.

Includes instruction and laboratory practice in either beginning or more advanced oxyacetylene and electric arc welding as applied to farm operations. The student and the instructor will decide whether beginning or advanced work will be taken. Those who have had a course in advanced welding should not enroll. Open to any interested student. Fee, \$5.

Plant Path. 5u. APPLIED PLANT PATHOLOGY. (U,G) 2 hours credit. Lectures, M T W Th 10-12. Plant Science 336. Laboratory, M F 1:30-4:30. Plant Science 242. Messrs. HICKEY, SCHULTZ, and SHERF.

Recent advances in the control of plant dis-

eases, and the basic principles underlying the changes, will be discussed and observed. Present research will be discussed and analyzed in terms of potential changes in disease control recommendations and the implications of changes on cultural practices. Attention will also be given to legal aspects of disease control, potential residues, and the relation of crop diseases and their control to transit and market deterioration.

R.E. 133u. SPECIAL PROBLEMS IN VOCATIONAL AGRICULTURE—PROGRAM PLANNING. (G) 2 hours credit. Experience as a teacher of agriculture or consent of instructor required. M T W Th F 8-9:50. Warren 14. Mr. DRAKE.

Considers the problems encountered by teachers of agriculture in planning local programs of vocational agriculture in the secondary schools. Emphasis will be given to the program planning procedures needed to design, carry out, and evaluate local programs in vocational agriculture. Findings of the course will be applied to local programs in which the participants are engaged.

R.E. 134u. ORGANIZATION AND DIRECTION OF YOUNG FARMER PROGRAMS. (U,G) 2 hours credit. Lectures, M T W Th F 8-9:50. Riley-Robb 225. Mr. BENDER.

Emphasis will be placed on solving the prob-

48 OTHER PROGRAMS

lems encountered by teachers of agriculture in such phases of the young farmer program as making arrangements to have a program, determining instructional needs and planning programs of instruction, teaching young farmers in groups, giving individual on-farm instruction, organizing and advising the local young farmer association, and evaluating the young farmer program.

R.E. 230u. SEMINAR IN AGRICULTURAL EDUCATION. (G) 2 hours credit. Lectures, M

T W Th F 10-11:50. Riley-Robb 225. Mr. BENDER.

The seminar will be centered in current problems affecting the teaching of agriculture in the secondary school. Consideration will be given to areas such as curricular offerings, guidance responsibilities, relationships with school personnel and laymen, program of work, developing quality programs, and others as identified by the students and instructor.

AGRICULTURAL ENGINEERING JUNE 11-JULY 20

Limited to students in the five-year agricultural engineering curriculum.

***Ag.Eng. 206. FIELD PROBLEMS IN AGRICULTURAL ENGINEERING.** (U) 6 hours credit. M T W Th F 8-5. Messrs. BOYD, GUNKEL, MILLIER, LEVINE, LUDINGTON.

Practice in applying engineering analysis and

design to typical field problems encountered in professional agricultural engineering assignments. The work is distributed in the fields of power and machinery, electrification, structures, and soil and water. Fee, \$5.

ENGINEERING INDUSTRIAL COOPERATIVE PROGRAM

Admission. Selected courses of the regular curricula in the College of Engineering are offered in the summer to accommodate the schedule of Cornell students in the Cooperative Program. Within the enrollment capacity of each course other students may be admitted to these courses provided that they present satisfactory evidence of being prepared and a letter of authorization from a college or university in which they are enrolled. Applications should be addressed to Director of Engineering Industrial Cooperative Program, Phillips Hall, Cornell University, Ithaca, N.Y.

Calendar. Courses are scheduled in two separate but consecutive seven-week periods: first period, June 11 to July 28; second period, July 30 to September 15.

Tuition and Fees. Because the Cooperative Program's Summer Term is essentially a curriculum term in the College of Engineering, tuition and fees are not those of the 6-week Summer School but are based upon the regular tuition and fees for a semester in the academic year.

Regulations and Services. In general the regulations described for the Summer School apply also to the Engineering Cooperative Summer Term.

Health services and library facilities are available during the Engineering Cooperative Summer Term.

Double Registration. Insofar as they can be scheduled, courses of the regular Summer School may be arranged for students admitted to the Engineering Cooperative Summer Term.

ENGINEERING MECHANICS AND MATERIALS

Engr. 1152. ENGINEERING MECHANICS—DYNAMICS. 3 hours credit. Prerequisites, 1151 and Mathematics 163. Second period. Mr. _____.

Engr. 1153. MECHANICS OF MATERIALS. 3 hours credit. Lectures. Laboratory. Prerequisite, 1151 or equivalent. First period. Mr. _____.

Engr. 1154. ADVANCED STRENGTH OF MATERIALS. 3 hours credit. Lectures. Recitations. Prerequisites, 1153 and 1155. First period. Mr. _____.

Engr. 1241. ENGINEERING MATERIALS. 3 hours credit. Lectures. Recitations. Laboratory. Prerequisites, 1153 and Chemistry 401 or 402. Second period. Mr. _____.

HYDRAULICS AND HYDRAULIC ENGINEERING

Engr. 2331. *FLUID MECHANICS*. 3 hours credit. Recitations. Prerequisite, 1152. Second period. Mr. _____.

INDUSTRIAL AND ENGINEERING ADMINISTRATION

Engr. 3246. *PRINCIPLES OF INDUSTRIAL ACCOUNTING*. 2 hours credit. Lectures. Computings. First period. Mr. _____.

Engr. 3264. *PRODUCTION ENGINEERING*. 3 hours credit. Lectures. Computings. Prerequisite, 3263. Second period. Mr. _____.

Engr. 3281. *COMPUTING EQUIPMENT AND INDUSTRIAL APPLICATIONS*. 3 hours credit. Recitations. Computings. Prerequisites, 3247, 3262, or permission. Second period. Mr. _____.

MACHINE DESIGN

Engr. 3341. *MACHINE DESIGN*. 4 hours credit. Recitations. Computings. Prerequisites, 1153, 1241, 3118, 4302, and 6110 or equivalent. Second period. Mr. _____.

Engr. 3351. *MECHANISM*. 3 hours credit. Recitations. Laboratories. Prerequisites, 3112, 1151. Second period. Mr. _____.

Engr. 3354. *DESIGN OF MACHINES*. 3 hours credit. Lectures. Laboratories. Prerequisites, 3353, 3404; prerequisite or parallel, 1242. First period. Mr. _____.

MATERIALS PROCESSING

Engr. 3404. *PRODUCTION MACHINE TOOLS*. 2 hours credit. Lectures. Laboratories. Prerequisites, 3406, 3262. First period. Mr. _____.

THERMAL ENGINEERING

Engr. 3601. *ENGINEERING THERMODYNAMICS*. 3 hours credit. Lectures. Recitations. Prerequisites, Mathematics 163, Physics 122, Chemistry 106. First period. Mr. _____.

Engr. 3603. *FLUIDS ENGINEERING I*. 3 hours credit. Recitations. Prerequisites, 3601, 1152. Second period. Mr. _____.

GENERAL ELECTRICAL ENGINEERING

Engr. 4021. *ENGINEERING REPORTS*. 3 hours credit. Lectures. Recitations. Second period. Mr. _____.

BASIC ELECTRICAL ENGINEERING

Engr. 4112. *ALTERNATING CURRENT CIRCUITS*. 3 hours credit. Lectures. Recitations. Computings. Prerequisites, 4102, 4103. First period. Mr. _____.

Engr. 4116. *ELECTRIC CIRCUIT LABORATORY*. 3 hours credit. Lectures. Laboratories. Prerequisites, 4102 or 4983. First period. Mr. _____.

Engr. 4121. *INTRODUCTION TO ELECTRONICS AND NONLINEAR ANALYSIS*. 4 hours credit. Lectures. Recitations. Laboratories. Prerequisites, 4116 and either 4112 or 4983. Second period. Mr. _____.

Engr. 4123. *ELECTRONICS OF SIGNAL TRANSMISSION*. 4 hours credit. Lectures. Recitations. Laboratories. Prerequisite, 4122. First period. Mr. _____.

Engr. 4226. *ELECTRICAL MACHINERY LABORATORY*. 4 hours credit. Lectures. Recitations. Laboratories. Prerequisite, 4221. First period. Mr. _____.

COURSES FOR STUDENTS NOT IN ELECTRICAL ENGINEERING

Engr. 4931. *ELECTRICAL ENGINEERING*. 3 hours credit. Lectures. Recitations. Computings. Prerequisites, Mathematics 163, Engr. 1132 or 1152. First period. Mr. _____.

Engr. 4932. *ELECTRICAL ENGINEERING*. 3 hours credit. Lectures. Recitations. Laboratories. Computing. Prerequisite, 4931. Second period. Mr. _____.

METALLURGICAL ENGINEERING

Engr. 6112. *METALS TECHNOLOGY*. 2 hours credit. Lectures. Prerequisites, 6110, 1243. First period. Mr. _____.

CHEMISTRY

Chem. 401. *INTRODUCTION TO PHYSICAL CHEMISTRY*. 3 hours credit. Lectures. Pre-

50 OTHER PROGRAMS

requisites, Chemistry 106, Mathematics 163, 183 or 193 and Physics 117. Second period. Mr. ———.

MATHEMATICS

Math. 613. METHODS OF APPLIED MATHEMATICS. 3 hours credit. Prerequisites, Mathematics 183 and 612. Second period. Mr. ———.

PHYSICS

Phys. 314. ATOM, NUCLEAR, AND ELECTRON PHYSICS. 3 hours credit. Lectures. Recitations. Prerequisites, Physics 124 and Mathematics 607 or equivalents. Second period. Mr. ———.

Phys. 323. ELECTRICITY AND MAGNETISM. 3 hours credit. Lectures. Prerequisites, Physics 123, or 208 and 209, or their equivalent. First period. Mr. ———.

ENGLISH LANGUAGE PROGRAM FOR FOREIGN STUDENTS JULY 16–AUGUST 24

The Summer Session, in cooperation with the Division of Modern Languages, offers an intensive course in advanced English language instruction. This six-week course is open to graduate students who have been accepted for study in an institution in the United States and for whom additional English language training has been recommended or is desired. Instruction will begin on July 16 and end on August 24.

Charges for the six-week program are as follows: Tuition and fees—\$240; room (estimated)—\$60; board (estimated)—\$120; incidentals (estimated)—\$50.

For further information and application forms write to Director of Summer Session, 117 Day Hall, Cornell University, Ithaca, N.Y.

HOME ECONOMICS EDUCATION JULY 2–JULY 27

A special four-week program for home economics teachers and extension workers provides opportunity to become acquainted with recent research in selected fields of home economics and to consider its relevance to teaching at various levels. Three units will be offered: a two-credit unit scheduled July 2 to 13 and two one-credit units scheduled during the weeks of July 16 and July 23. Students may register for the full program or for any part of it. Students who have received credit for a similar course, such as that offered under the same number and title in the summer of 1961, are also eligible.

Students may register at the regular Summer School registration on June 27 in Barton Hall, or at the Summer Session office in Day Hall during the mornings of July 2, July 16, or July 23. Pre-application to register is strongly recommended.

Tuition will be \$25 per credit. Partial scholarships (not to exceed one-half of tuition) are available for a limited number of home economics teachers in New York State. Applications for scholarships must be received by May 10. For application forms write to Professor Kathleen Rhodes, Martha Van Rensselaer Hall, Cornell University, Ithaca, N.Y.

***H.E.Ed. 456u. CURRENT DEVELOPMENTS AND HOME ECONOMICS EDUCATION.** (G) 1 to 4 hours credit. Lecture and discussion, M T Th F 1–4:30 July 2 to 6, M T W Th F 1–3:30 for remaining weeks. Van Rensselaer 124. Miss RHODES, MRS. BAYER, Miss STEININGER, and MRS. RYAN.

Emphasis for 1962 is on recent research concerning the adolescent in the family setting, and suggestions for teaching this area at var-

ious levels. In each unit, attention will be given to one topic as follows: July 2–13, the adolescent and his relationships within the family; July 16–20, nutrition for the adolescent; July 23–27, clothing as related to adolescent behavior.

Class meetings will be devoted to presentation of subject matter followed by discussion and illustration of teaching methods and materials. Fee, \$1 for each credit.

HOTEL ADMINISTRATION JUNE 25–AUGUST 11

In 1922, Cornell University established, with the cooperation and financial assistance of the American Hotel Association, a four-year course in hotel administration for high school graduates desiring to enter the administrative departments of the hotel business. Many hotel proprietors and managers who have been unable to take a four-year university course have asked for shorter courses with less formal entrance requirements.

To meet this demand, the Summer School work in hotel administration is given in unit courses, one to three weeks in length. A circular giving full details of these courses has been issued and will be sent upon request. For this circular, for other information about the work in this School, and for admission to these courses, address Dean R. A. Beck, Statler Hall, Cornell University, Ithaca, N.Y.

READING AND STUDY SKILLS PROGRAM JULY 2–AUGUST 3

Purpose. The College Reading and Study Skills Center will provide a five-week summer program in reading, study, writing, and speaking skills for high school students planning to attend college. This program is not for retarded readers or for young people with below-average ability. The objective is to help students who have completed their junior or senior years to be better qualified to meet the requirements for classwork and study at the college level.

Instruction. The following areas will be covered:

1. Reading: The improvement of both speed and comprehension; special techniques for reading textbooks.
2. Writing: The procedure involved in selecting a topic and writing a paper.
3. Speaking: Preparing and delivering both speeches and oral reports.
4. Study Skills: Library research, time schedules, taking lecture notes, taking notes from textbooks, preparing for and taking examinations, techniques of class discussion.
5. General Aspects of Communication: Understanding basic principles of organization, vocabulary building, critical listening and critical reading of factual material.

Classes. Meetings will be held on Monday through Friday from 8:30 to 12:30.

Expenses. The tuition for the course is \$150, with an additional University fee totaling \$25. The fee will cover use of the University library, health center, and recreation center.

Application. Students seeking admission should write to Dr. Walter Pauk, 304 Rand Hall, Cornell University, Ithaca, N.Y.

REGIONAL EXTENSION SUMMER SCHOOL JULY 9–JULY 27

A regional summer program is conducted for the professional improvement of Cooperative Extension workers. Students may choose two courses for three hours credit at the graduate level. Tuition is \$40, with an additional \$10 fee if a third course is audited.

For printed announcement with complete details, write to Professor Arthur E. Durfee, 102 Roberts Hall, Cornell University, Ithaca, N.Y.

SHELL MERIT FELLOWSHIP PROGRAM JUNE 28–AUGUST 10

For teachers of chemistry, mathematics, and physics and a few selected supervisors of these subjects. Address inquiries to Professor Philip Johnson, Shell Merit Fellowship Program, Cornell University, Ithaca, N.Y.

CHEMISTRY

99. PROBLEMS IN CHEMICAL EDUCATION. (U,G) 3 or 4 hours credit. Lectures, M T W Th F 8-10. Laboratory, M T 2-4:30 for those who elect 4 hours credit. Field trips Th afternoon.

EDUCATION

226P. SEMINAR IN SCIENCE AND MATHEMATICS TEACHING. (U,G) 2 or 3 hours credit. Lectures, M T W Th F 10:30-11:50. Laboratory, M T 2-4:30. Field trips, Th afternoon.

MATHEMATICS

223. BASIC CONCEPTS OF SECONDARY SCHOOL MATHEMATICS. (U,G) 3 or 4 hours credit. Lectures, M T W Th F 8-10. Laboratory, M T 2-4:30 for those who elect 4 credit hours. Field trips, Th afternoon.

PHYSICS

101. TOPICS IN PRESENT-DAY PHYSICS. (U,G) 3 hours credit. M T W Th F 8-10.

109. GENERAL PHYSICS LABORATORY. (U,G) 1 hour credit. M T 2-4:30.

SOUTHEAST ASIA LANGUAGE PROGRAM JUNE 18-AUGUST 24

The Southeast Asia Language and Area Center at Cornell, in cooperation with the Language Development Section of the United States Office of Education, offers a program of intensive language instruction in Indonesian and Thai. Four courses are available during a period of ten weeks in which the student may earn twelve hours credit in Indonesian at either an introductory or intermediate level or at the introductory level in Thai.

Tuition for the program is \$35 per credit hour. Fees amounts to \$5 per week or \$50 for the period. Living arrangements may be made through the Summer Session Office, 117 Day Hall, for use of University housing facilities. Room rates per week are \$8 per person for double room and \$11 single. There are a number of dining accommodations on the campus for students in summer programs.

It is anticipated that a comparable program will be offered in alternate summers, beginning in 1963, by Yale University.

For further information and application form address the Director, Southeast Asia Program, 100 Franklin Hall, Cornell University, Ithaca, N.Y.

ADVANCED-PLACEMENT PROGRAM FOR SECONDARY SCHOOL STUDENTS JUNE 27-AUGUST 10

The program offers college-level courses in bacteriology, botany, chemistry, languages (*French, German, or Russian*), mathematics, and zoology, each requiring the full time of the student and providing six hours of credit.

The program is open only to academically talented students preparing for college who have completed the eleventh year in high school by June, 1962.

Special provisions are made for housing, dining, and counseling services. The usual health services and all extracurricular activities provided in the Summer Session are available. The total cost for each student of \$350 includes all charges except for books.

For further information and application form, address Professor Martin W. Sampson, Director, Advanced-Placement Program, 117 Day Hall, Cornell University, Ithaca, New York. *Applications must be submitted no later than April 17.*

OFFICERS

DEANE W. MALOTT, A.B., M.B.A., LL.D., D.C.S., President of the University.
THOMAS W. MACKESEY, B.Arch., M.C.P., Dean of the University Faculty.
DAMON BOYNTON, Ph.D., Dean of the Graduate School.
WILLIAM A. SMITH, Ph.D., Director of the Division of Summer Session and Extramural Courses.

FACULTY

RALPH P. AGNEW, Ph.D., Professor of Mathematics.
H. DARKES ALBRIGHT, Ph.D., Professor of Speech and Drama.
HOWARD G. ANDRUS, Ph.D., Professor of Guidance and Personnel Administration.
CARROLL C. ARNOLD, Ph.D., Professor of Speech and Drama.
CESAREO BANDERA-GOMEZ, M.A., Instructor in Romance Literature.
CHARLOTTE W. BAUMGARTNER, Ph.D., Professor of Textiles and Clothing.
HELEN BAYER, Ph.D., Associate Professor of Home Economics Education.
RALPH BENDER, Ph.D., Professor of Agricultural Education, Ohio State University, Columbus.
THOMAS W. BENSON, B.A., Acting Instructor, Reading-Study Program.
ARTHUR L. BLOOM, Ph.D., Assistant Professor of Geology.
ISADORE BLUMEN, Ph.D., Professor of Industrial and Labor Relations.
DOUGLAS M. BOWEN, Ph.D., Professor of Chemistry, Dartmouth College, Hanover, New Hampshire.
LEWIS L. BOWER, M.B.A., Associate Professor of Housing and Design.
LANDIS L. BOYD, Ph.D., Professor of Agricultural Engineering.
CLYDE W. BRESEE, Ph.D., Director of Guidance, Athens, Pennsylvania.
WILLIAM A. CAMPBELL, M.A., Professor of Music.
GERALD J. CANTER, Ph.D., Assistant Professor of Speech and Drama.
MARY M. CARMICHAEL, Ph.D., Assistant Professor of Home Economics Education.
JOHN W. CHAPMAN, Ph.D., Professor of Government, University of Pittsburgh, Pennsylvania.
SAMUEL CONTI, Ph.D., Professor of Microbiology, Dartmouth Medical School, Hanover, New Hampshire.
NORMAN DALY, M.A., Professor of Art.
ALICE J. DAVEY, M.S., Assistant Professor of Household Economics and Management.
PAUL DE MAN, Ph.D., Associate Professor of Romance Literature.
ROBERT DONOVAN, Ph.D., Assistant Professor of English.
DOUGLAS F. DOWD, Ph.D., Associate Professor of Economics.
WILLIAM E. DRAKE, M.A., Assistant Professor of Agricultural Education.
JOHN M. ECHOLS, Ph.D., Professor of Linguistics.
DONALD A. EDWARDS, Ph.D., Assistant Professor of Physics.
MARION EHRHART, M.S., Trumansburg, New York.
DANIEL ELLER, M.M., Assistant Professor of Music.
KENNETH EVETT, M.A., Professor of Art.
SIDNIE FEIT, A.B., Lecturer in Mathematics.
SUMNER FERRIS, B.A., Instructor in English.
GEORGE FISCHER, Ph.D., Professor of Government.
EPHIM FOGEL, Ph.D., Associate Professor of English.
ARDEN FRANDSEN, Ph.D., Professor of Education, Utah State Agricultural College, Logan, Utah.
HARRISON A. GEISELMANN, Ph.D., Instructor in Secondary Education.
JAMES L. GIBBS, JR., Ph.D., Professor of Anthropology, University of Minnesota, Minneapolis.

54 FACULTY

- VICTOR GOLD, Ph.D., Professor of Chemistry, King's College, London, England.
 JOHN I. GREENE, Ph.D., Assistant Director, State School of Conservation, Branchville, New Jersey.
 JAMES DOUGLAS GRIERSON, Ph.D., Instructor in Botany.
 DAVID I. GROSSVOGEL, Ph.D., Associate Professor of Romance Literature.
 WESLEY W. GUNKEL, Ph.D., Professor of Agricultural Engineering.
 CHARLES L. HAMILTON, Ph.D., Professor of History, Dartmouth College, Hanover, New Hampshire.
 LAWRENCE S. HAMILTON, M.F., Associate Professor of Conservation.
 OLIVER H. HEWITT, Ph.D., Professor of Conservation.
 KENNETH D. HICKEY, Ph.D., Assistant Professor of Plant Pathology.
 LAWRENCE B. HIXON, Ed.D., Associate Professor of Education.
 JOHN HSU, M.M., Associate Professor of Music.
 JOHN HUDSON, Ph.D., Assistant Professor of Child Development and Family Relationships.
 FRANKLIN E. HUFFMAN, B.A., Instructor in Linguistics.
 HENRY L. ISAKSEN, Ph.D., Director of Pupil Personnel Service, Lexington, Massachusetts.
 MAURITZ JOHNSON, JR., Ph.D., Professor of Secondary Education.
 PHILIP G. JOHNSON, Ph.D., Professor of Education.
 DONALD KAGAN, Ph.D., Assistant Professor of History.
 MAXINE M. KLEIN, M.A., Assistant Professor of English, Keuka College, Keuka, New York.
 JOHN H. KOLB, Ph.D., Professor, Emeritus, of Sociology, University of Wisconsin, Madison.
 RUDOLPH KREMER, M.A., Instructor of Music.
 HERBERT L. KUFNER, Ph.D., Associate Professor of German.
 HARRIOTT O. KUNKEL, Ph.D., Professor of Biochemistry and Nutrition, Texas A. & M., College Station.
 SHELDON KURLAND, M.M., Assistant Professor of Music.
 WALTER LAFEVER, Ph.D., Assistant Professor of History.
 MARION L'AMOREAUX, M.S., Chairman, Language Arts Program, Newark, New York.
 ALICE LAZEROWITZ, Ph.D., Professor of Philosophy, Smith College, Northampton, Massachusetts.
 MORRIS LAZEROWITZ, Ph.D., Professor of Philosophy, Smith College, Northampton, Massachusetts.
 FRED G. LECHNER, Ed.D., Assistant Professor of Agricultural Engineering.
 RICHARD L. LEED, Ph.D., Assistant Professor of Russian.
 CLIFFORD S. LEONARD, JR., Ph.D., Assistant Professor of French.
 GILBERT LEVINE, Ph.D., Professor of Agricultural Engineering.
 JOHN W. LEWIS, Ph.D., Assistant Professor of Government.
 JOHN A. LINDLOF, M.Ed., Acting Instructor in Education.
 DAVID C. LUDINGTON, M.S., Assistant Professor of Agricultural Engineering.
 EDWIN P. MARKS, Ph.D., Professor of Zoology, Washburn University, Topeka, Kansas.
 DONALD J. MCCARTY, Ph.D., Associate Professor of Rural Education.
 L. GRANT MCCONNELL, Ph.D., Associate Professor of Government, University of Chicago, Illinois.
 WALTER T. McDONOUGH, Ph.D., Assistant Professor of Biology, University of Cincinnati, Ohio.
 LEO MELTZER, Ph.D., Assistant Professor of Psychology.
 CLARA MELVILLE, Ph.D., Assistant Professor of Child Development and Family Relationships.
 G. CORY MILLICAN, M.F.A., Associate Professor of Housing and Design.
 WILLIAM F. MILLIER, Ph.D., Professor of Agricultural Engineering.
 HAROLD E. MITZEL, Ph.D., Director of Research and Evaluation, Colleges of the City of New York.
 ROYAL E. MONTGOMERY, Ph.D., Professor of Economics.
 HERBERT F. NEWHALL, Ph.D., Professor of Physics.
 VINCENT J. NUCCIO, M.Ed., Assistant Professor of Education.
 ROBERT M. PALMER, M.M., Professor of Music.
 LYMAN G. PARRATT, Ph.D., Professor of Physics.
 STEPHEN M. PARRISH, Ph.D., Associate Professor of English.
 IRENE PATTERSON, M.S., Associate Professor of Home Economics Education.
 WALTER PAUK, Ph.D., Associate Professor of Education.
 HENRY PERKINSON, Ph.D., Assistant Professor of Education, Kent State University, Kent, Ohio.
 HERBERT PICK, JR., Ph.D., Assistant Professor of Psychology, University of Wisconsin, Madison.
 MARY E. PURCHASE, Ph.D., Associate Professor of Household Economics and Management.
 DAVID RAY, M.A., Instructor in English.
 FORREST READ, Ph.D., Assistant Professor of English.
 KATHERINE REEVES, Ph.D., Professor of Child Development and Family Relationships.
 L. TODD REYNOLDS, Ph.D., Assistant Professor of Chemistry.
 KATHLEEN RHODES, Ph.D., Associate Professor of Home Economics Education.
 WILLIAM L. RICHARDS, M.C.E., Associate Professor of Civil Engineering.

- RICHARD E. RIPPLE, Ph.D., Assistant Professor of Education.
 JERRY RIVERS, Ph.D., Assistant Professor of Food and Nutrition, Pennsylvania State University, State College.
 KENNETH L. ROBINSON, Ph.D., Professor of Agricultural Economics.
 GERSON ROBISON, Ph.D., Professor of Education, New York State University College of Education, New Paltz.
 MARY S. RYAN, Ph.D., Professor of Textiles and Clothing.
 JAGDISH C. SANWAL, Ph.D., Instructor in Mathematics.
 THOMAS M. SCHEIDEL, Ph.D., Assistant Professor of Speech and Drama.
 OTTO E. SCHULTZ, Ph.D., Assistant Professor of Plant Pathology.
 ALAIN SEZNEC, D.E.S., Associate Professor of Romance Literature.
 NANCY SHAFFER, M.S., Instructor in Food and Nutrition.
 IRIS SHAH, Ph.D., Assistant Professor of Linguistics.
 ARDEN F. SHERF, Ph.D., Professor of Plant Pathology.
 RUTH SHERLOCK, M.S., Lecturer in Textiles and Clothing.
 CHARLES G. SIBLEY, Ph.D., Professor of Conservation.
 HAL H. SMITH, Ph.D., Assistant Professor of English.
 DONALD F. SOLÁ, Ph.D., Associate Professor of Spanish and Quechua.
 FRANCES M. SPRATT, M.S., Associate Professor of Textiles and Clothing.
 GEORGE J. STALLER, Ph.D., Assistant Professor of Economics.
 GRACE STEININGER, Ph.D., Professor of Food and Nutrition.
 TAYLOR W. STOEHR, Ph.D., Instructor in English.
 EVELYN E. STOUT, Ed.D., Associate Professor of Textiles and Clothing.
 GEORGE SUCL, Ph.D., Assistant Professor of Child Development and Family Relationships.
 VIRGINIA TRUE, M.F.A., Professor of Housing and Design.
 LOWELL D. UHLER, Ph.D., Professor of Biology.
 GORDON F. VARS, Ed.D., Associate Professor of Secondary Education.
 FREDERICK O. WAAGE, Ph.D., Professor of Fine Arts.
 MARVIN WALDMAN, Ph.D., Associate Professor of Clinical and Preventive Medicine.
 JEAN WARREN, Ph.D., Professor of Household Economics and Management.
 WILLIAM J. WASMUTH, Ph.D., Assistant Professor of Industrial and Labor Relations.
 JOHN W. WELLS, Ph.D., Professor of Geology.
 ROBIN M. WILLIAMS, JR., Ph.D., Professor of Anthropology.
 GIFFORD W. WINGATE, M.A., Associate Professor of Speech and Drama, Union College, Schenectady, N.Y.
 JAMES A. WOOD, M.A., Instructor, Reading-Study Program.
 NANCY V. WOOD, B.A., Instructor, Reading-Study Program.
 BERNHARD WUNDERLICH, Ph.D., Assistant Professor of Chemistry.
 PAULA B. YELLIN, B.S., Instructor in Chemistry.
 ROBERT ZIMMERMANN, Ph.D., Assistant Professor of Psychology.

INDEX

- Academic credit, 4
- Administration
 - educational, 24
 - personnel, 25
- Administrators' Conference, 24
- Admission, 2
 - to Graduate School, 9
- Adult education, 26
- Advanced degrees, 9, 10
- Agricultural economics, 47
- Agricultural education, 47
- Agricultural engineering, 47, 48
- Anthropology, 44
- Application
 - for admission, 4
 - for Graduate School, 9
 - for rooms, 11
- Art, 20
 - Housing and Design Art Gallery, 38
 - White Museum, 17
- Auditors, 5
 - tuition, 5
- Automobiles, 14
- Bacteriology, 20
- Biochemistry, 21
- Biology, 21
- Board, 10
- Botany, 21
- Cafeterias, 12, 16
- Calculus, 40, 41
- Calendar, 1
 - weekly, 15
 - Willard Straight, 16
- Cancellation
 - of courses, 6
 - of registration, 6
- Changes in registration fee, 6
- Chapel, 16
- Checks, cashing of, 8
- Chemistry, 22
 - engineering, 49
- Child development and family relationships, 36
- Chinese government, 35
- Choir, 16
- Classrooms, 19
- Clinic, 12
- Clothing and textiles, 39
- Concerts, 16
- Conduct and scholarship, 14
- Conservation, 23
- Contents, iii
- Counseling services, 13
 - foreign students, 13
- Courses of instruction, 19
- Credit, 4
 - Cornell undergraduate, 5
 - for advanced degrees, 9
 - graduate, 4, 9
 - non-Cornell undergraduate, 3
- Curriculum, 19
 - education, 26
- Dancing, 16
- Deposits, 7
 - Graduate School, 9
 - room, 11
- Dining services, 12
- Dormitories, 10
- Drama, 45, 46
- Drawing, 20
- Economics, 23
 - agricultural, 47
- Economics, household, and management, 37
- Education, 23
 - advanced degrees in, 9, 10
 - candidates in school of, 10
- Educational measurement, 24
- Elementary education, 25
- Engineering, 28, 48
 - agricultural, 48
 - civil, 28
 - electrical, 49
 - hydraulics, 49
 - industrial and engineering administration, 49
 - Industrial Cooperative Program, 48
 - law, 28
 - machine design, 49
 - materials processing, 49
 - mechanics and materials, 28, 48
 - metallurgical, 49
 - thermal, 49
- Engineering Industrial Cooperative Program, 48
- Engineering law, 28
- English, 28
 - for foreign students, 50
- Examinations, 19
- Extension Education, 51
- Extracurricular activities, 15
- Faculty, 53
- Family relationships, 36
- Fees, 6, 7
- Films, 17
- Financial Aid, 8
- Fine Arts, 20
- Food and nutrition, 37

- Foreign students
 - counseling services, 13
 - English for, 50
- French, 33
- General fee, 7
- Geology, 34
- Geometry, 40
- German, 33
- Golf, 17, 18
- Government, 35
- Grades, 5
- Graduate School, 8
- Graduates, admission of, 3
- Guidance and personnel, 25
- Health services, 12
- History, 35
 - of education, 26
- Home Economics, 36
 - education, 26, 50
- Hospital, 13
- Hotel administration, 51
- Household economics and management, 37
- Housing, 10
 - application for, 11
 - assignments, 11
 - married students, 12
 - men, 11
 - off-campus, 12
 - women, 10
- Housing and design, 38
- Incomplete grade, 5
- Indonesian, 52
- Industrial and labor relations, 40
 - special seminars, 40
- Infirmary, 13
- International relations, 35
- Junior high school education, 28
- Laboratory fees, 19
- Languages, 33
- Late registration fee, 6, 7
- Lectures, 17
- Libraries, 13
- Literature
 - children's, 36
 - English, 28
 - French, 33
 - Spanish, 34
- Map of campus, 30
 - key, 29
- Marriage, 36
- Mathematics, 40
 - engineering, 28, 50
- Meals, 12
- Medical clinic, 12
- Mental health, 41
- Museum, 17, 38
- Music, 41
 - recorded, 16
- Natural history, 27
- Noyes Lodge, 16
- Nutrition, 37
- Off-campus housing, 12
- Officers, 53
- Ornithology, 23
- Other programs, 47
 - Agricultural education, 47
 - Agricultural engineering, 48
 - Engineering industrial cooperative, 48
 - English for foreign students, 50
 - Home economics education, 50
 - Hotel administration, 51
 - Reading and study skills, 51
 - Regional extension education, 51
 - Shell Merit Fellowship, 51
 - Southeast Asia language, 52
- Painting, 20
- Personnel administration, 25, 40
- Philosophy, 42
 - of education, 26
- Physics, 43
 - engineering, 50
- Physiology, plant, 21
- Plant pathology, 47
- Psychology, 44
 - educational, 24
- Quechua, 34
- Reading and study skills, 27, 51
- Recreation, 17
- Refunds
 - dormitory deposit, 11
 - tuition, 6
- Regional extension education, 51
- Registration, 6
 - changes in, 6
 - in Graduate School, 9
 - late fee, 6, 7
- Religious services, 16
- Research (in education), 26
- Residential halls, 10
- Romance literature
 - English, 28
 - French, 33
 - Spanish, 34
- Rural education, 24, 47, 48
- Rural sociology, 44
- Russian, 34
- Schedules
 - class, 19
 - examinations, 19
 - room, 19
- Scholarships, 7, 8
- Science education, 27
- Secondary education, 27
- Shell science program, 51
- Sociology, 44
- Softball, 17, 18
- Soviet Union
 - government, 35
 - political theory, 35
- Spanish, 34
- Special regulations, 14
- Special students, admission of, 4
- Speech and drama, 45
- Sports, 17
- Squash, 17
- Statistics, 25

58 SUMMER SCHOOL

- Student union, 12, 16
- Supervision in education, 24
- Swimming, 18
- Tennis, 17, 18
- Textiles and clothing, 39
- Thai, 52
- Theatre, 17, 46
- Tours of the campus, 16
- Travel information, 16
- Tuition, 6, 7
 - scholarships, 7
- Undergraduates, admission of, 3
- Unit courses, 19
 - agricultural economics, 47
 - agricultural education, 47
 - agricultural engineering, 47, 48
 - botany, 21
 - chemistry, 22
 - description of, 19
 - extension education, 51
 - food and nutrition, 37, 50
 - geology, 34
 - home economics education, 50
 - hotel administration, 51
 - household management, 37, 38
 - languages, 33, 34
 - music, 42
 - reading and study skills, 49
 - regional extension education, 51
 - rural education, 47, 48
 - tuition, 7
 - zoology, 46
- Veterans, 8
- Vocational agriculture, 47
- Vocational guidance, 25
- Willard Straight Hall, 16
- Withdrawal, 6
- Zoology, 46

FOR UNDERGRADUATE STUDENTS ONLY

Request additional forms from:

Director of Summer Session
117 Day Hall, Cornell University
Ithaca, N.Y.

CORNELL UNIVERSITY SUMMER SESSION—1962 UNDERGRADUATE APPLICATION FOR ADMISSION AND COURSE PROGRAM

(Due in Summer Session Office by June 22, 1962)

Mr.
Name Miss
Mrs. (Family Name) (First Name) (Middle Name)

Present
Mailing Address
Home
Address
(Street and No.) (City) (State)

Name of your college or university
Check status which applies:

- ☐ Now a candidate in good standing for undergraduate degree
☐ High school graduate accepted for admission
Falsification of this statement may result in denial of admission.

PREREGISTRATION FOR COURSES

An undergraduate is required to register for no less than three credit hours. Programs of more than seven credit hours must be approved by the Summer Session Director. (See further explanatory statements on reverse side of this form.)

List each course carefully, indicating the exact departmental abbreviation, course number, course title, credit hours, and class meeting time in the spaces provided below. (Undergraduates are not permitted to audit courses except by permission of the Director.)

Dept. Abbrev.	Course No.	Course Title	Credit Hours	Meeting Time
.....
.....
.....
.....

(Leave the following spaces blank)

Received	Recorded	Sent
.....

NOTE CAREFULLY

Undergraduate applicants are urged to advise with an appropriate official in the college either to which they have been admitted or where now matriculated in planning their course programs. Grades for courses studied by Cornell students are automatically sent to their college offices. For all other students, a transcript of the Summer School record will be sent to their college only upon request directed to the Registrar of Cornell University.

It is assumed that the student meets all the prerequisites stipulated in the description of each course included in his program. Discovery after the Session has started that the student lacks prerequisites will result in cancellation of the registration and possible withdrawal from the Session. Course descriptions are found only in the complete *Announcement of the Summer School, 1962* (not the Preliminary Announcement).

If the institution in which you now are enrolled or to which you have been admitted is Cornell University, the following statement of approval must be completed by the appropriate University official, see page 5 of the Summer School Announcement.

The registration of the applicant for the courses listed on this application is approved as being applicable toward candidacy for the degree sought. (State any other condition of approval if needed).....

.....

Signature

Official Title

Mail this application to:
(Due June 22, 1962)

Director, Summer Session
117 Day Hall, Cornell University
Ithaca, New York

FOR GRADUATE and SPECIAL STUDENTS ONLY

Request additional forms from:
Director of Summer Session
117 Day Hall, Cornell University
Ithaca, N.Y.

CORNELL UNIVERSITY SUMMER SESSION—1962

APPLICATION FOR ADMISSION AND COURSE PROGRAM

Mail this application to the Director of the Summer Session, 117 Day Hall, Cornell University, Ithaca, New York, by June 15 to assure place in the classes.

GRADUATE AND SPECIAL STUDENTS

Mr.
Name Miss
Mrs. (Family Name) (First Name) (Middle Name)

Address
(Street and No.) (City) (State)

PREREGISTRATION FOR COURSES

The courses listed below must be chosen from the *Announcement of the Summer School, 1962* (not the Preliminary Announcement). List courses carefully, indicating the departmental abbreviation, the course number, course title, credit hours, and meeting time in the spaces provided below.

Prior approval of this program assures you of a place in the classes listed below. However, it is possible to change courses on registration day.

Please list *entire* program.

Dept. Abbrev.	Course No.	Course Title	Credit Hours	Meeting Time
.....
.....
.....
.....

(Leave the following spaces blank)

Received	Recorded	Sent
.....

ACADEMIC BACKGROUND

Please check the appropriate item to indicate your highest level of academic preparation, and name the institution.

- ☐ High School Graduate
☐ Undergraduate Degree from—

.....
(Institution) (Location) (Degree held) (Year)

- ☐ Now a candidate for a Graduate Degree at—

.....
(Institution) (Location) (Degree sought) (Year)

- ☐ Holder of Advanced Degree from—

.....
(Institution) (Location) (Degree held) (Year)

Note: If you wish to become a candidate for an advanced degree at Cornell University, apply directly to the Graduate School, 125 Day Hall, as well as to the Summer Session Office. Admission to the Summer Session does not constitute admission to the Graduate School.

IF EMPLOYED IN AN EDUCATIONAL INSTITUTION, complete the following—

Teacher: (check) Elementary School ☐; Jr. High School ☐; High School ☐; Jr. College ☐; College or University ☐.

.....
(School)

.....
(Location)

.....
(Position and subject or grade)

Administrator, Supervisor, or Other School Position:

.....
(School or School System)

.....
(Location)

.....
(Title or position)

OTHER PROFESSIONAL, SCIENTIFIC, OR BUSINESS POSITION

(Examples: Research chemist; freelance writer; copywriter; veterinarian; minister; development engineer; editor; salesman; etc.)

.....
(Firm or Institution)

.....
(Location)

.....
(Title or position)