

Cornell University

ANNOUNCEMENTS

Summer Session



1966

SUMMER SESSION OFFICE

The Office of the Summer Session is in Room B-20, Ives Hall; the telephone number of the office and of the Director is 275-5192. The office will be open from 8 a.m. to 4:30 p.m., except Saturday, during the period of the Summer Session; on Saturday the office will close at 12 noon. Professor William A. Smith is Director.

ADMINISTRATIVE BOARD

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CORNELL UNIVERSITY ANNOUNCEMENTS

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Summer Session

1966

- Eight Weeks' Session, June 20–August 13
- Six Weeks' Session, June 29–August 13
- Other Programs in the Summer Session

Calendar

June 20, Monday

Registration for the 8-week Summer Session: in Room 117, Ives Hall any time between the hours of 8 a.m. and 5 p.m. which does not conflict with attendance in the class meeting of courses elected. Persons registering after this date without prior approval will pay a \$10 fee for late registration. Tuition and fees are due for payment at the Treasurer's Office, 260 Day Hall, which closes at 4:30 p.m. Instruction begins at the time and place announced for each course.

June 22, Wednesday

Last day for withdrawal from the 8-week session without payment of a fraction of tuition and fees.

June 24, Friday

Last day for payment of tuition and fees for the 8-week session at the Treasurer's Office which closes at 4:30 p.m.

June 29, Wednesday

Registration for the 6-week Summer Session: undergraduates, 8:30 to 11 a.m.; graduates and special students, 1 p.m. to 3:30 p.m., in Lynah Hall. Persons registering after this date without prior approval will pay a \$10 fee for late registration. Tuition and fees are due for payment at the Treasurer's Office, 260 Day Hall.

June 30, Thursday

Instruction in the 6-week session begins at the time and place announced for each course. Late registrants report to the Summer Session Office, B20 Ives Hall, to complete registration.

July 1, Friday

Last day for making changes in registration in the 8-week session *without payment of fee* at the Summer Session Office. A \$10 fee for change in registration will be charged after this date. Last day for withdrawal from the 6-week session without payment of a fraction of tuition and fees.

July 4, Monday

Holiday

July 5, Tuesday

Last day for payment of tuition and fees for the 6-week session at the Treasurer's Office, which closes at 4:30 p.m.

July 8, Friday

Last day for making changes in registration in the 6-week session *without payment of fee* at the Summer Session Office. A \$10 fee for change in registration will be charged after this date.

July 15, Friday

Last day for making changes in registration in the 8-week session. *No changes will be permitted after this date except for reasons beyond the control of the student.*

July 20, Wednesday

Last day for making changes in registration in the 6-week session. *No changes will be permitted after this date except for reasons beyond the control of the student.*

July 25, Monday

Registration at the Summer Session Office for the second period of any three-week unit courses elected by students not previously registered in the Summer Session.

August 11, Thursday

Final examinations begin; schedule on pages 25 and 26.

August 12, Friday

Six-week and eight-week sessions end, 4 p.m.

BE SURE TO BRING THIS ANNOUNCEMENT WITH YOU FOR USE ON REGISTRATION DAY AND THROUGHOUT THE SUMMER SESSION.

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Cornell University

THE SUMMER SESSION

GENERAL INFORMATION

The Summer Session of Cornell University is planned with the cooperation of the faculties of the separate schools and colleges. The program is designed with particular regard for what can be taught satisfactorily in a short term and in a summer period environment. Every effort is made to maintain the same standards of instruction and academic performance as those of the academic year.

In addition to serving the needs of undergraduate and graduate degree candidates, the Summer Session seeks to serve a wide variety of interests among persons for whom the summer period may be especially convenient.

Classes in the summer provide the particular advantage of optimum size for close association between student and instructor. The median class size in past summers has ranged from 12 to 15 students.

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

Admission

The Summer Session 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 Session establishes no priority with respect to admission to the regular terms. Students seeking admission to Cornell undergraduate colleges

should apply to the Office of Admissions, 247 Day Hall, by January first of the year in which entrance is desired.

Students are eligible for admission to the Summer Session 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 pages 63 and 64.

Undergraduates are required to register for no less than 4 credit hours if in the 8-week session and 3 credit hours if accepted for the 6-week session. A student who can devote full time to his studies is expected to enroll for more than the minimum. Registration for more than 9 credit hours in the 8-week session or 7 credit hours in the 6-week session will be permitted only to students with high academic averages or upon recommendation of their advisers.

Application for admission consists of completing the undergraduate application form which is found in the back of this Announcement or which will be mailed on request. An undergraduate candidate for a degree in Cornell University must have the application approved by the appropriate officer of his school or college (see page 8).

Undergraduates are expected to apply for admission by June 10 if for the 8-week session, or by June 20 if for the 6-week session. Notification of admission prior to registration cannot be guaranteed to those whose applications are received after those dates. Late applications will be considered, however, and every effort will be made to act on them in time for enrollment.

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 carried will be appropriate to their degree programs. Courses in the Summer Session 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 Session.

GRADUATES

This classification is only for candidates for advanced degrees in Cornell University or elsewhere. Application for admission to either the 8-week or 6-week sessions should be made by June 15 to ensure a place in classes. A graduate student may apply as late as the date of registration in either session but does so at the risk of finding the course enrollment closed.

The graduate application form will be found in the back of this Announcement or will be mailed on request. Admission to the Summer Session does not constitute admission to the Graduate School of Cornell University as a degree candidate.

A graduate student matriculated in the Graduate School of Cornell University may, in the 8-week session, register for as many as 10 hours of credit upon recommendation of his Special Committee chairman. In the 6-week session the maximum is 8 credit hours.

Degree candidates may seek residence credit toward degrees in the amount of two-fifths of a unit for a program of 6 or more credit hours in the 6-week session. (See page 13 for information regarding admission to the Graduate School.)

A candidate for a graduate degree in an institution other than Cornell University and who is planning to obtain credit toward his degree by means of his Summer Session program does not register in the Cornell Graduate School but only in the Summer Session. Before registering he should arrange with the institution in which he is a degree candidate for the acceptance of the credit earned.

SPECIAL STUDENTS

A mature person who is not a candidate for an academic degree will be admitted to the 8-week or 6-week sessions to take courses for vocational or personal purposes. Those courses may be elected at either the graduate or undergraduate level depending on the student's background. Such a person is to apply for admission by completing the "special students" application form found in the back of this Announcement, or which will be mailed on request. Application for admission should be made by June 15 to ensure a place in classes. A special student may apply as late as the date of registration in either session but does so at the risk of finding the course enrollment closed.

High school students who do not classify as "undergraduates" (see page 6) are not eligible for admission to the 8-week or 6-week sessions as "special students."

APPLICATION FOR ADMISSION

Application for admission to the 8-week or 6-week sessions of 1966 must be made on an application form found in the back of this Announcement. Request for an additional copy is to be addressed to the Director of Summer Session. When requesting the form, please indicate whether for undergraduate, graduate, or special student status. In most cases the information called for on the form will be sufficient.

Registration coupons, necessary for registration in the 8-week or 6-week sessions, will be mailed to the applicant after favorable action on the application has been taken. Included is a Certificate of Admission.

Applicants for admission to other programs of the Summer Session do not use the forms referred to above. A separate application form prepared for each such program must be used. (See descriptions of Other Programs pages 63 to 75.)

Academic Credit

Courses offered in the 8-week and 6-week sessions are assigned appropriate hours of credit. The same is true in many of the other programs of the Summer Session. Students are not to register for any course work which normally cannot be completed by the end of the Summer Session term.

In this Announcement each credit 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. 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 Session.

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 Session only after the appropriate 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 G. F. Cronkhite.

College of Home Economics: Mrs. Alyene F. Brown.

College of Engineering: *Basic Studies*, Professor H. G. Smith; *Chemical*, Professor C. C. Winding; *Civil*, Professor N. A. Christensen; *Electrical*, Professor J. L. Rosson; *Industrial*, Professor B. W. Saunders; *Materials Science and Engineering*, Professor M. S. Burton; *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. D. P. Dietrich.

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

GRADES

All courses are reported on the basis of letter grades: A+ through D— and F (for failure). 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 mark 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." *A mark of F will become the final recorded grade for the course if the work is not completed by January 1, 1967.* It is the student's responsibility to make such specific arrangements with his instructors. Students are not to register for any course which normally cannot be completed by the end of the Summer Session 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 D— as the lowest passing grade.

TRANSCRIPTS

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 Session will be sent to the college of the student's choice *only* upon request directed to the University Registrar and payment of the fee of one dollar per transcript. Normally there are no grades, and no transcript is available for "non-credit" courses.

Registration

All students in the 8-week session will register on Monday, June 20. All classes scheduled for the eight weeks will start on this date. Students

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are to complete their registration at any time during the day between the hours of 8 a.m. and 5 p.m. which does not conflict with attendance in the class meeting of courses for which they are registering.

Each student must bring his registration form, including the certificate of admission sent to each pre-admitted applicant, to Room 117 Ives Hall for completion and approval. Directions for processing the registration will be given at that time.

Students in the 6-week session will register on Wednesday, June 29, in Lynah Hall. Only undergraduates register in the forenoon. Graduate and special students register in the afternoon. The certificate of admission, sent to each pre-admitted student for the 6-week session, will state 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 Lynah Hall: undergraduates at 8:30 a.m.; graduate and special students at 1 p.m.

Students in the 6-week session who register for *only* a unit course scheduled to start July 25 will do so on the date of the first class meeting of the course. Unless otherwise specified, the place of registration will be the Summer Session Office, B20 Ives Hall, at a time during the day which does not interfere with class attendance.

Persons who fail to appear for registration on the date specified for either the 8-week or 6-week sessions will be charged a fee of \$10 for late registration unless the fee is waived through prior approval of the Summer Session Director.

Formal registration is required for admission to courses of the Summer Session.

Registration for *Other Programs* (see pages 63 to 75) will take place at the time and place specified for each program.

CHANGES IN REGISTRATION

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

No change of registration is official unless made by appearing at the Summer Session Office, B20 Ives Hall. This must be done as early as possible. Except for reasons beyond the control of the students, no change in registration will be permitted after 4 p.m., July 15, for students in the 8-week session and after 4 p.m., July 20, for those in the 6-week session. When a change in registration involves enrollment in another course, the permission of the instructor of the new course is necessary, but that does not make the change official.

Penalty fees for changes in registration are described under Fees and Deposits, page 11.

WITHDRAWAL FROM SUMMER SESSION

A student may apply for withdrawal at any time. He must come to the Summer Session Office to do so. 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. There is no charge if withdrawal is made by Wednesday, June 22, in the 8-week session and by Friday, July 1, in the 6-week session.

Tuition and Fees

Tuition and fees are due and payable at the Treasurer's Office in Day Hall on registration day. For the 8-week session the date is June 20. For the 6-week session the date is June 29.

The last day for payment without penalty is Friday, June 24, in the 8-week session and Tuesday, July 5, in the 6-week session. A penalty of \$10 is charged if payment is made after these dates. The Treasurer's Office closes at 4:30 p.m.

Tuition is charged according to the number of credit hours for which the student is registered. The rate of tuition is \$45 per credit hour. Students in the 8-week or 6-week sessions, permitted to elect one or more courses from a Special Program of the Summer Session (see pages 63 to 75), will be charged at the \$45 rate per credit hour.

FEES AND DEPOSITS

All students in the 8-week and 6-week sessions will pay, in addition to tuition, a general fee of \$5 per week which entitles them to medical and hospital services (see page 17), administration services, and student union membership. Fees for laboratories, field trips, and incidental expenses are charged in those courses indicated by asterisks in the course descriptions.

A student who finds it necessary to register after the regular registration date for each session must pay a \$10 late registration fee unless prior approval of the Summer Session Director has been obtained for the delay.

A student who has approval to make a change in program (see definition, page 10) after 4 p.m. on July 1 in the 8-week session or July 8 in the 6-week session must pay a \$10 change of registration fee. No change in program will be permitted after 4 p.m., July 15, for students in the 8-week session and after 4 p.m., July 20, for those in the 6-week session, except for reasons beyond the control of the student.

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 matricula-

tion fee and covers certain expenses incidental to graduation if the student receives a degree. The deposit is not refundable.

For other information concerning Graduate School regulations, see page 13.

Other Regulations Concerning Fees

Any student, graduate or undergraduate, who fails to pay his tuition, fees, and other indebtedness at the Treasurer's Office 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 Session are not eligible for University financial aid. In special cases, however, when the applicant is a regular full-time student at Cornell and his Summer Session program has the full approval of his faculty adviser, he will be considered for loan assistance.

There are no general University scholarships for Summer Session study.

Opportunities for student employment during the summer session are so limited that students should not rely on this means of financing any part of their Summer Session expenses.

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.

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 Session 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 Arts in Teaching (M.A. in T.); Master of Industrial and Labor Relations (M.I.L.R.); Doctor of Education (Ed.D.); and Doctor of Philosophy (Ph.D.).

When the candidate has registered in both the Summer Session and the Graduate School, six or more credit hours in the 6-week session will count as two-fifths of a unit if approved in advance and reported as acceptable by the Special Committee.

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 for study in the Summer Session may be accepted in fulfillment of requirements for the doctorate. Upon recommendation by the Special Committee of a student and on approval by the Dean of the Graduate School, residence may be transferred for study in one preceding Cornell Summer Session period if such study is attested to be an integral part of the graduate program subsequently undertaken.

ADMISSION

Students intending to become candidates for advanced degrees at Cornell should write to the Dean of the Graduate School, Sage Graduate Center, 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. 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 that 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 11).

REGISTRATION

Only students approved for admission in the Graduate School must register in both the Summer Session and the Graduate School. Full in-

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formation and proper forms for registering in the Graduate School are to be obtained from the Graduate School Office 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 Session who were not registered in the preceding spring term, but who expect to continue as full-time graduate students in a succeeding fall or spring term, 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 Session 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 Arts for Teachers (M.A.T.), Master of Arts in Teaching (M.A. in 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

HOUSING

Rooms are available in University-operated housing units for all students registered in the 6-week or 8-week Summer Sessions, both graduate and undergraduate men and women. A leaflet giving detailed information on housing, *Residence Halls for Men and Women*, will be mailed by the Office of the Summer Session after admission has been approved. 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 occupants. The occupants also furnish their own towels and soap.

UNDERGRADUATE WOMEN. All undergraduate women and women under twenty-one who are registered as special students are re-

quired to live and take their meals in a University residence hall. There will be a uniform charge of \$212.75 for board and room for the 6-week Summer Session and \$254.50 for the 8-week Summer Session.

There is a head resident in the dormitory 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. All graduate women and those special student women twenty-one and over may make application for accommodations in a graduate residence hall or make arrangements to live off campus.

The rates for the 6-week Summer Session are \$69 for single and \$51 per person for double accommodations. For the 8-week Summer Session, the rates are \$92 for a single room and \$68 per person for a double. For periods of three weeks or less the rates are \$12.50 single and \$9.50 double per person per week or part of a week. All rates cover the cost of room only. 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 6-week Summer Session are \$69 for single and \$51 per person for double accommodations. For the 8-week Summer Session, the rates are \$92 for a single room and \$68 per person for a double. For periods of three weeks the rates are \$12.50 single and \$9.50 double per person per week or part of a week. All rates cover the cost of room only.

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 (see page 19). There are no prescribed closing hours for men's dormitories.

OPENING-CLOSING DATES. Living units to be used during the 6-week Summer Session will open for occupancy on Tuesday, June 28; they will close at 2 p.m., Saturday, August 13. Living units to be used during the 8-week Summer Session, will open on Sunday, June 19 and close at 2 p.m., Saturday, August 13. *Earlier or later occupancy will not be possible under any circumstances.*

APPLICATION FOR ROOMS. An application for a room assignment in a residence hall cannot be given consideration unless it is submitted on an official application form to the Department of Housing and Dining Services. 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 Session 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 6-week or 8-week Summer Sessions 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 ensure 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 be made about September 15. This date applies even though the student terminates residence prior to the end of the Summer Session.

Room deposits which accompany room applications will be refunded to those students who file with the Director of Housing and Dining Services 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.*

MARRIED-STUDENT AND OFF-CAMPUS HOUSING. The Off-Campus Housing Office in Day Hall is maintained by the Department of Housing and Dining Services. 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 Session range from \$65 to \$175 a month.

There is normally an adequate supply of rooms available in off-campus locations for the Summer Session. 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 Housing and Dining Services, 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, Noyes Lodge on Beebe Lake, the Martha Van Rensselaer Cafeteria, and the Dairy Bar Cafeteria in Stocking Hall. Meals obtained in these places, or in the cafeterias, dining rooms, and restaurants near the campus, will cost approximately \$3 to \$4 a day.

Health Services

The facilities of the student medical services are available to all students officially registered in the Summer Session as follows:

FOR REGULAR EIGHT AND SIX WEEKS' SUMMER SESSION STUDENTS:

(1) Unlimited visits to the Gannett Medical Clinic, 10 Central Avenue; (2) hospitalization at Tompkins County Hospital with medical care for three days for students in the 8-week session and two days for those in the 6-week session; (3) emergency surgical care. This is defined as initial surgical procedures which are necessary for the immediate welfare and safety of the patient.

FOR STUDENTS REGISTERED IN SPECIAL PROGRAMS:

(1) Same as (1) above for the period of registration; (2) hospitalization based upon length of registration—none if less than three weeks; if more than three weeks, graduated up to fourteen days, the maximum based on the entire Summer Session of approximately three months; (3) emergency surgical care: same as (3) above except none for students registered for less than three weeks.

If a student elects to consult a private physician, the cost of this service is not covered by the health fee.

Students who withdraw from the Summer Session terminate Health Services as of the withdrawal date.

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 on duty at the above hours except between 12 noon and 2 p.m. weekdays. Nurses are in attendance at all times during clinic hours.

EMERGENCY SERVICE. On a limited basis with a nurse in attendance, the Gannett Medical Clinic will also be open 4:30 to 11 p.m. weekdays, 12 noon to 11 p.m. Saturdays, and 11 a.m. to 5 p.m. Sundays, for illness and accidents occurring after regular clinic hours. These extra hours are not intended for conditions that could be treated during the regular hours. Should illness or accident occur after 11 p.m. on a weekday or after 5 p.m. on a Sunday, students should call 272-6962 or 275-5211 for instruction. The extended hours are in effect only for the 6- and 8-week sessions.

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 Gannett Medical Clinic, Ithaca 275-3493, *when the clinic is open (see hours above)*, Ithaca 272-6962 after clinic hours. This service is not designed to care for students in their rooms. A charge of \$5 in the daytime and \$10 at night is made for these calls.

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 International 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 Library, consisting of the Olin Library for graduate study and research and the Uris Library for undergraduate use, 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, the Physical Sciences Library, and the Veterinary Library. In addition there are numerous department libraries in the separate schools and colleges.

The union catalog, 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 Olin Library. Specialized reference materials will be found in the various college, school, and department libraries. The Reference Department of the Olin Library and the library staffs 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 2,900,000 volumes. The number of periodicals, transactions, and other serials currently received is over 30,000.

In the course of their development the libraries have acquired and have built up a variety of special collections. Illustrative of these resources are collections on the American Civil War, Abolition and Slavery, Apiculture, Botany, China and Southeast Asia, Dante, English and French Revolutions, Freemasonry, History of Science, History of Superstition, Icelandic, Joyce, Kipling, Pascal, Petrarch, Shaw, Wordsworth, and Regional History, and the University Archives.

The privilege of borrowing books for home use is granted to all students who comply with the library regulations. Presentation of the official Summer Session Registration Certificate is required when borrowing books. Stack permits for the Olin and Mann libraries are issued to graduate students. Carrels in the stacks of the Olin, Mann, and Industrial and Labor Relations libraries are also available for assignment to graduate students upon application.

Xerox copy service for library books and periodicals and academically related materials is available in the Olin, Mann, Physical Sciences, and

Engineering libraries. A schedule of the hours for all libraries on campus will be available at summer session registration desks and in the *Weekly Bulletin*.

Special Regulations

STUDENT CONDUCT

The Summer Session is administered under the same general regulations governing student conduct which apply to all other sessions of the University, with slight modifications to cover the special circumstances of the Summer Session. Students are expected to familiarize themselves with the contents of the Student Code and the Academic Integrity Code. The Codes are available at Summer Session registration and from the Office of the Dean of Students, 133 Day Hall.

The Codes, products of extensive deliberations involving students, faculty, and administration are statements of minimum standards and regulations necessary to ensure maximum individual freedom and the effective functioning of the University as an educational institution.

In addition, students living in University dormitories and other group residences are responsible for familiarizing themselves with the specific rules applying to their places of residence. They may obtain copies of the rules from dormitory head residents, graduate residents, and counselors.

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.

DRESS REGULATIONS

Students are expected to dress appropriately for all occasions. During the Summer Session the majority of students on the campus are adult, and Cornell is host to many conferences composed largely of older people. Therefore, students are expected to dress according to the adult standards they are assuming by attending Cornell. Bermuda or walking shorts, shirts, and footwear are considered minimal attire in all buildings.

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 person registered in a program of the Summer Session who owns, maintains, or for his 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 Bulletin and Calendar

The Summer Session *Weekly Bulletin*, issued and posted on each Saturday of the 6-week Summer Session, 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 Martha Van Rensselaer 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 University union building is reserved for the students, faculty, staff, alumni, and guests of Cornell University as a campus gathering point and a center for social, cultural, and recreational activities. It provides meal service; snacks for late afternoon and evening; lounges; rooms for student meetings; the University Theatre; a billiard and game room; a barber shop for men; a browsing library well stocked with books, periodicals, and newspapers; 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 for 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.

The Willard Straight Summer Session Committee arranges lectures, trips, nature walks, square dances, art exhibits, open houses, tournaments, luncheons with distinguished faculty, receptions, and dances. Students are encouraged to submit new program ideas and to participate on the committee.

The right is reserved to request appropriate identification from persons using the Hall and its facilities, and participating in its program.

CONCERTS

The Summer Session concert series will consist of five Thursday evening concerts. The dates are July 7, 14, 21, 28, and August 4. All concerts begin at 8:15 p.m. Performing artists will be announced.

RELIGIOUS SERVICES

Sage Chapel

Non-denominational services (ecumenical insofar as possible) are held in Sage Chapel throughout the academic year with visiting clergymen of various denominations and faiths preaching. During the Summer Session period a similar series is provided in the chapel at 11 a.m. on the six Sundays, July 3 — August 7, inclusive.

Anabel Taylor Hall

Cornell United Religious Work, the University's division of religious affairs, has its headquarters in Anabel Taylor Hall. The University

Chaplains, with offices in Anabel Taylor Hall, may be reached through the CURW Information Office, Room 118, Extension 4214, where information about religious services may be obtained.

Summer Session Choir

Music for the Sage Chapel services is provided by the Summer Session Choir, Professor Thomas A. Sokol, Choirmaster, and by the University Organist, Mr. Donald R. M. Paterson. The Choir rehearses in Sage Chapel on Tuesday evenings at 7:15 p.m. and on Sunday mornings at 9:30. The first rehearsal will be held on Sunday, July 3. All students and interested persons are invited to participate.

PUBLIC LECTURES

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

SUMMER THEATRE

A resident producing company under the direction of the University Theatre staff will again offer weekly dramatic presentations illustrating varied trends in playwriting and production modes. Among performances during the past two summers have been such plays as Samuel Beckett's *Endgame*, Bertolt Brecht's *Galileo*, Eugene O'Neill's *Ah, Wilderness!*, John Dos Passos' *U.S.A.*, Christopher Fry's *The Lady's Not for Burning*, James Joyce's *Finnegans Wake*, and John M. Synge's *The Well of the Saints*. The 1966 series of presentations will continue to satisfy the taste of discriminating playgoers as to both choice of material and standard of production. Dates of the performances, for which admission is charged, appear in the *Weekly Bulletin*.

The Summer Theatre program is coordinated with the course offerings in the Department of Speech and Drama (see page 61). Undergraduate and graduate credit is available to qualified students who enroll in Speech and Drama 383, Theatre Practice. Students enrolled in this course fulfill their laboratory requirements by working with the resident producing company. Related to Theatre Practice are such Speech and Drama courses as 286, Play Production; 375, The Motion Picture: A Survey; 393, American Drama and Theatre; and 374, Brecht and the Absurdist. Any of these latter courses may be taken separately. Any one of them taken in conjunction with Theatre Practice constitutes a full-course load of six credit hours.

Details of participation in the Summer Theatre program—for academic credit or on an extracurricular basis—may be obtained from Professor Gordon E. Beck, Managing Director, Summer Theatre, 112 Lincoln Hall, Cornell University, Ithaca, New York 14850.

ART EXHIBITS

Andrew Dickson White Museum of Art

Cornell's White Art Museum continues to present a dynamic program of circulating exhibitions in addition to housing the University art collections for teaching purposes.

During the summer of 1966, selections from the Museum's Asian, contemporary, and graphics collection will be on view.

The Museum is open daily, except Monday, from 11 to 4:30; Sunday, from 2:30 to 5.

Van Rensselaer Art Gallery

Exhibits of current interest, including painting, sculpture, printmaking, design, crafts, and architecture, are on display in the Housing and Design Art Gallery on the third floor of Martha Van Rensselaer Hall (Room 317). Students, faculty, and visitors are cordially invited to visit these exhibits. The Gallery is open Monday through Friday from 12 to 5.

SPORTS

Softball diamonds on Upper Alumni Field, tennis courts conveniently situated around the campus, and the 18-hole University Golf Course on Warren Road are available for the use of Summer Session 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 6-week 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 the official Summer Session Registration Certificate is required for admittance.

Women students may use the gymnasium in Helen Newman Hall from 1 to 5 p.m. Monday through Friday. Equipment is available for badminton, basketball, and volleyball. Students must furnish their own gymnasium shoes.

Grumman Squash Courts

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

Swimming

Swimming facilities in Teagle Hall pool will be available for male students Monday through Friday each week from 12:30 to 3 p.m. Students will be admitted upon presentation of the official Summer Session Registration Certificate. A towel may be obtained upon presentation of the Registration Certificate.

Women students may use the Helen Newman Hall Pool from 1 to 2 p.m. and from 3 to 5 p.m. Monday through Friday. Towels and suits are provided, but students must furnish their own bathing caps. From 3 to 5 p.m. women may be accompanied by a male guest.

Intramural Softball League

Groups or individuals who wish to participate in softball competition should see Mr. Glen Davis, 275-3475 or 273-1395.

Private Lessons

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

Tennis: Hours to be arranged. Call Mr. Alf Ekman. 275-3653 or 272-8303.

Golf: Hours and Instructor in charge to be announced. Call Mr. George Hall at the University Golf Course, 275-3361.

Swimming: Hours to be arranged. See Mr. Glen Davis at Beebe Lake, or call 275-3475 or 275-3557.

SUMMER-ITHACA

A calendar of varied events of interest to summer residents and visitors to the Finger Lakes area is published by Summer-Ithaca, a community organization, and the Ithaca Chamber of Commerce. Cornell University cooperates in developing this program of events. The scope of activities includes theatre, concerts, lectures, films, exhibits, and recreation designed to appeal to a wide range of ages and interests. All events, many without charge, are open to Summer School students and add to the attractiveness of summer in Ithaca.

SCHEDULE OF COURSES

Course offerings of the Summer Session are organized and described on the following pages under three classifications: the Eight-Week Session, the Six-Week Session, and Other Programs, with cross-reference to those offerings which apply to more than one such classification. The following information applies to all classifications unless exception is specified.

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 is occasionally necessary to substitute an instructor for one 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, those of 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 11 for tuition charges.)

COURSES REQUIRING LABORATORY OR OTHER FEES are marked by an asterisk.(*).

CLASS SCHEDULES. For most courses, classes will meet five times a week on each weekday except Saturday throughout the period of the session or Special Program. The hours of class meetings are specified in the course description. Courses in the 8-week session normally meet for 50 minutes daily. Courses in the 6-week session carrying 2 credit hours also meet for 50 minutes daily. Other courses in the 6-week session meet for 75 minutes daily.

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 in courses in the 8-week and 6-week sessions will be held on Thursday, August 11, and Friday, August 12, 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.

26 SCHEDULE OF COURSES

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.

EXCEPTIONS: For all unit courses in either half of the 8- and 6-week sessions, the final examination will be on Friday.

EIGHT-WEEK SESSION

June 20 — August 12

Registration for the following courses is to be completed Monday, June 20, between the hours of 8 and 4:30. Each student must report to the Summer Session office, Room B-20, Ives Hall, at a time during the day which will not conflict with attendance in the first class meeting of any course in his program.

Graduate and Special Students, required to have course coupons approved by the course instructor, are to obtain such approval before reporting to the Summer Session office to complete registration.

Any student in the 8-week session may elect a course from the program of courses for the 6-week session if the time-schedule of classes will permit.

For other general information see pages 5 to 26.

ART

Drawing, Painting, and Sculpture

Art 14. BEGINNING PAINTING AND DRAWING. (U,G)

3 hours credit. Open to all students. M T W Th F 8-10 plus independent work. Franklin 200. Mr. Daly.

A beginner's course requiring no previous experience. The fundamentals of color and design will be used creatively in simple pictorial presentation. These presentations will progress from the simple to the more complex. Lectures and discussions, individual and group criticisms.

Art 15. LIFE AND PORTRAITURE. (U,G)

3 hours credit. Open to all students. M T W Th F 10-12 plus independent work. Franklin 200. Mr. Daly.

Several different approaches to drawing and painting the human being will be presented and varieties of media encouraged. A model will be employed.

Art. 16. BEGINNING LANDSCAPE PAINTING. (U,G)

3 hours credit. Open to all students. M T W Th F 8-10 plus independent work. Franklin 316.

Studio and outdoors painting dealing with a study of spatial and color relations in landscape painting.

Art 17. ADVANCED PAINTING. (U,G)

3 hours credit. Open to students with previous studio experience. M T W Th F 10-12 plus independent work. Franklin 316.

The course permits the student to develop his own inclinations while giving him an opportunity to have a close contact with a visiting critic-painter.

Art 18. SCULPTURE. (U,G)

3 hours credit. Open to all students. M T W Th F 8-10 plus independent work. Foundry.

Individual assignments and criticism for students of all levels of experience.

Art 19. METHODS AND MATERIALS OF SCULPTURE. (U,G)

3 hours credit. Open to all students. M T W Th F 10-12 plus independent work. Foundry.

An introduction to the carving of wood and stone; casting and carving of concrete; optional work in other media.

ECONOMICS

Econ. 103. MODERN ECONOMIC SOCIETY. (U)

3 hours credit. M T W Th F 9. Goldwin Smith 160. Mr. Perlman.

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 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. Goldwin Smith 225. Mr. Berki.

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. 311. INTERMEDIATE MICRO-ECONOMIC THEORY. (U,G)

4 hours credit. Prerequisite, Economics 103 or its equivalent. M T W Th F 9. Goldwin Smith 264. Mr. Sowell.

Analysis of the pricing processes in a private enterprise economy under varying competitive conditions, and their role in the allocation of resources and the functional distribution of national income.

Econ. 312. INTERMEDIATE MACRO-ECONOMIC ANALYSIS. (U,G)

4 hours credit. Prerequisite, Economics 104 or its equivalent. M T W Th F 11. Goldwin Smith 264. Mr. Perlman.

A study of the nature and causes of business recessions, revivals, and booms, and of general price trends, together with a consideration of various alternative methods of promoting business cycle stabilization and price stabilization. The approach will be partly historical, partly analytical.

Econ. 341. ECONOMICS AND PROBLEMS OF LABOR. (U,G)

4 hours credit. Prerequisite, Economics 103-104 or the consent of the instructor. M T W Th F 11. Goldwin Smith 234. Mr. Sowell.

A survey of the field of labor economics; an analysis of the basic industrial-relations problems emerging from modern economic arrangements; and an examination of the economic and other implications of various employer, trade-union, and government attacks upon these problems.

Econ. 351. PRIVATE ENTERPRISE AND PUBLIC POLICY. (U,G)

4 hours credit. Prerequisite, Economics 103-104. M T W Th F 10. Goldwin Smith 242. Mr. Berki.

The approach to public policy in a private enterprise system in the light of the economist's concepts of competition and monopoly. Economic bases for delineating the public and private sectors and the public regulatory function. An analysis and appraisal of the prevalence and effectiveness of competition in the American economy, with particular emphasis on the busi-

ness organization; the price, production, and marketing policies; and the economic performance of a range of industries characterized by varying degrees of market concentration and government intervention.

Econ. 361. INTRODUCTION TO INTERNATIONAL ECONOMIC

THEORY AND POLICY. (U,G)

4 hours credit. Prerequisite, Economics 103-104 or their equivalent. M T W Th F 9. Goldwin Smith 234. Mr. Zupnick.

A survey of the principles that have evolved as guides for the determination of international economic policies. Topics include balance of payments, foreign exchange, theory of trade and tariffs, capital movements, and international adjustment mechanisms. Attention is paid to the historical evolution of the principles, policies, and institutions from precapitalist origins to the present.

Econ. 371. PUBLIC POLICY AND ECONOMIC DEVELOPMENT. (U,G)

4 hours credit. Prerequisite, Economics 103-104 or consent of the instructor. M T W Th F 11. Goldwin Smith 160. Mr. Zupnick.

Study of the role of the state in initiating and maintaining accelerated economic growth in less developed countries. Problems of capital accumulation, interaction of culture change and economic growth, outside participation in economic modernization, and the role of international specialization are emphasized.

ENGINEERING

Electrical Engineering

Engr. 242. ELECTRICAL SCIENCE II. (U)

3 hours credit. Prerequisite, Engr. 241. Lectures, M T W Th F 10; and W 7:30-10 p.m. or S 9-12 a.m. if there are no conflicts. Phillips 219.

The basic principles of electric and magnetic fields and circuits for steady fields, voltages, and currents. The relaxation and steady-state behavior of simple systems. Emphasis is placed on understanding of the physical concepts.

ENGINEERING INDUSTRIAL COOPERATIVE PROGRAM

(See Other Programs, page 69.)

Materials Science and Engineering

Engr. 6211. MATERIALS SCIENCE (U)

3 hours credit. Prerequisite, Physical Chemistry or the equivalent. Lectures, M T W Th F 9; laboratory, W 2-4:30 and M 7:30-10 p.m. or S 9-12 a.m. if there are no conflicts. Bard Hall and Kimball Hall.

Binding of atoms. Diffraction and structure. Equilibrium of assemblies of matter. Metastable states of matter. Elastic and plastic deformation. Laboratory work includes experiments in X-ray diffraction, phase equilibria, microstructure of materials, diffusion, heat treatment, and mechanical properties of materials.

Theoretical and Applied Mechanics

Engr. 212. MECHANICS OF RIGID AND DEFORMABLE BODIES II. (U)

4 hours credit. Prerequisite, Engr. 211 or equivalent. Lectures and recitations M T W Th F 11; computing-laboratory M T 2-4:30. Thurston 202.

Inelastic behavior. Energy methods in mechanics. Principles of particle dynamics. Theory of oscillations. Kinematics of rigid body motion. Dynamics of systems of particles. Kinetics of rigid bodies. Text: Housner and Hudson, *Applied Mechanics, Dynamics*, 2d ed.

MATHEMATICS

Math. 192. CALCULUS FOR ENGINEERS (U)

4 hours credit. Prerequisite, Mathematics 191 or its equivalent. M T W Th F 8-9:15. White 310.

Transcendental functions, technique of integration and multiple integrals, vector calculus, analytic geometry in space, partial differentiation, applications. Text: Thomas, *Calculus and Analytic Geometry*, chaps. 7-15.

Math. 294. ENGINEERING MATHEMATICS. (U)

3 hours credit. Prerequisite, Mathematics 293. M T W Th F S 8. White B-29.

Linear differential equations, quadratic forms and eigenvalues, differential vector calculus, applications.

PHILOSOPHY

Phil. 101. INTRODUCTION TO PHILOSOPHY. (U)

3 hours credit. M T W Th F 9. 225 Goldwin Smith. Mr. Goldberg.

An introduction to philosophy through the consideration of a number of traditional problems. The existence of God, the problem of free will and determinism, and the nature of our knowledge of the external world are among the issues which will be treated. Texts: Hume, *Dialogues Concerning Natural Religion*; Hook, *Determinism and Freedom*; Hospers, *An Introduction to Philosophical Analysis*.

Phil. 311. PHILOSOPHY OF MIND. (U,G)

4 hours credit. M T W Th F 11. 225 Goldwin Smith. Mr. Goldberg.

The nature of emotion, imagination, remembering, the mind-body problem, the problem of the existence of other minds, materialism, behaviorism, and the concept of personal identity will be examined. Contemporary articles on these topics will be read and discussed. Texts: Gustavson, *Essays in Philosophical Psychology*; Chappell, *The Philosophy of Mind*; Hook *Dimensions of Mind*.

PHYSICS

*Physics 122. INTRODUCTORY ANALYTICAL PHYSICS II. (U)

3 hours credit. Prerequisites, Physics 121 and at least simultaneous registration in Mathematics 192, or consent of the instructor. Lectures, T Th 10. Rocke-

feller. A. Recitations, M W F 10. Rockefeller 103. Laboratory, T 2-5. Rockefeller 252. Mr. Newhall.

Conservation of linear momentum, kinetic-molecular theory of gases, properties of solids and liquids, mechanics of rigid bodies, harmonic motion, and fundamentals of wave propagation. At the level of *Introductory Analytical Physics* (2d ed.), Parts I and II, by Newhall. Fee, \$5.

***Physics 207u. FUNDAMENTALS OF PHYSICS. (U)**

4 hours credit. *June 20 to July 15*. Prerequisites, high-school physics and Mathematics 111, or consent of the instructor. Physics 207-208 as a sequence is intended as the first college-physics course for most students majoring in a natural science or in mathematics; not for students who have completed Physics 101-102 or 121-122. Lectures, T W Th F 8-9:15. Rockefeller B. Recitations, M T W Th F 11-12:15. Rockefeller 109. Laboratory, T Th 2-5. Rockefeller 322. Mr. Rajaraman.

Emphasis is placed on the fundamental concepts of the various branches of physics as well as on the unity of the subject as revealed by the basic ideas common to all of physics. Analytical techniques are developed in problem and laboratory work. Topics: dynamics of particles, conservation laws, collisions, harmonic motions. At the level of *Physics for Students of Science and Engineering* by Halliday and Resnik. Fee, \$5.

***Physics 208u. FUNDAMENTALS OF PHYSICS. (U)**

4 hours credit. *July 18 to August 12*. Prerequisites, Physics 207 and Mathematics 112, or consent of instructor. Summer session students may obtain "advanced placement" in lieu of Physics 207 (and 4 hours credit for Physics 207 in the Cornell College of Arts and Sciences) by passing a special advanced placement examination administered by the Department of Physics on June 20. Lectures, T W Th F 8-9:15. Rockefeller B. Recitations, M T W Th F 11-12:15. Rockefeller 109. Laboratory, T Th 2-5. Rockefeller 322. Mr. Rajaraman.

Essentially a continuation of Physics 207. Topics: dynamics of fluids, sound waves, laws of thermodynamics, kinetic theory of gases. Electromagnetic waves, nature of and propagation of light, diffraction, interference, and the wave-particle properties of matter. Fee, \$5.

***Physics 224. INTRODUCTORY ANALYTICAL PHYSICS IV. (U)**

4 hours credit. Prerequisites, Physics 223 and at least simultaneous registration in Mathematics 294, or consent of instructor. Lectures, W F 12. Rockefeller A. Recitations, M T Th S 12. Rockefeller 104. Laboratory T F 2-5. Rockefeller 30.

Superposition of waves; interference and diffraction. Selected topics from contemporary physics such as relativity, quantum effects, atomic and x-ray spectra, nuclear structure and reactions, solid state physics. The laboratory work includes experiments in electrical measurements, physical electronics, optics, and nuclear physics. At the level of *Physics for Students of Science and Engineering, Part II*, by Halliday and Resnick, and of *Elementary Modern Physics* by Weidner and Sells. Fee, \$5.

***Physics 500. INFORMAL GRADUATE LABORATORY (G)**

1 to 3 hours credit. Prerequisites, Physics 361 and 436, or consent of the instructor. Associated with the Physics 510 laboratory. Laboratory open M T W Th F 2-5, Clark 208. Mr. Hartman.

Topics as in Physics 510. Fee, \$5 per credit hour.

***Physics 510. ADVANCED EXPERIMENTAL PHYSICS (G)**

3 hours credit. Prerequisites, Physics 410 and 443, or consent of the instructor. M T W Th F 2-5, Clark 308. Mr. Hartman.

About seventy different experiments are available among the subjects of mechanics, acoustics, optics, spectroscopy, electrical circuits, electronics and ionics, heat, X-rays, crystal structure, solid state, cosmic rays, and nuclear physics. The student is expected to perform four to eight experiments, selected to meet his individual needs. Stress is laid on independent work. Fee, \$15.

Note:

The following Spanish courses will be offered only in the six-week session.

SPANISH

Span. 308. 19TH AND 20TH CENTURY SPANISH-AMERICAN LITERATURE. (U,G)

4 hours credit. Prerequisite, reading knowledge of Spanish. M T W Th F 9:30-10:45. Goldwin Smith 277. Mr. Bernstein.

A survey of Spanish-American poetry, fiction, and essay from the time of the Independence to the present. Special attention will be given to the modernist movement in poetry and to the various forms of the modern novel.

Span. 354. THE 20TH CENTURY NOVEL IN SPAIN. (U,G)

4 hours credit. Prerequisite, reading knowledge of Spanish. M T W Th F 11:30-12:15. Goldwin Smith 277. Mr. Bernstein.

Reading and discussion of the major novelists. Special attention given to the historical and political situation of Spain in 1900, the literary importance of the generation of 1898, the impact of Ortega y Gasset, the literary situation during the Second Republic, and the importance of the émigré writers after the Civil War.

For other Spanish courses, see page 51.

SIX-WEEK SESSION

JUNE 29 — AUGUST 12

For registration procedures and other information see pages 5 to 26.

Students admitted to this session may not elect courses from the eight-week session. They may elect a course from among those in Special Programs, pages 63 to 75, only by permission of the Program Director and if there is no conflict in the time schedule of classes. Tuition for such courses is at the rate charged in the six-week session.

AGRICULTURAL EDUCATION

(See Other Programs, page 64.)

AGRICULTURAL ENGINEERING

(See Other Programs, pages 64 and 66.)

AGRONOMY

(See Other Programs, page 64.)

ANTHROPOLOGY

Anthro. 301. CULTURAL ANTHROPOLOGY. (U,G)

3 hours credit. M T W Th F 9:30-10:45. McGraw 305. Miss Richards.

A study and comparison of the types of learned, shared, and transmitted behavior patterns and ideas by means of which men of various periods and places have dealt with their environment, worked out their social relations with their fellow men, and defined their place in the cosmos. An inquiry into human nature and its expression in man's institutional and intellectual creations.

Anthro. 413. THEORY OF CULTURE CHANGE. (U,G)

3 hours credit. Prerequisite, Anthropology 101 or 301, or consent of instructor. M T W Th F 11-12:15. McGraw 305. Miss Richards.

A study of the various theories of cultural change and their relevance to the on-going social process; an analysis of such concepts as innovation, diffusion, and acculturation in relation to culture change theory; a consideration of factors involved in maintaining stability or stimulating change in non-industrialized cultures.

ART

Drawing, Painting and Sculpture

Art 14S. BEGINNING PAINTING AND DRAWING. (U,G)

2 hours credit. Open to all students. M T W Th F 8-10 plus independent work. Franklin 200. Mr. Daly.

A beginner's course requiring no previous experience. The fundamentals of color and design will be used creatively in simple pictorial presentation. These presentations will progress from the simple to the more complex. Lectures and discussions, individual and group criticisms.

Art 155. LIFE AND PORTRAITURE. (U,G)

2 hours credit. Open to all students. M T W Th F 10-12 plus independent work. Franklin 200. Mr. Daly.

Several different approaches to drawing and painting the human being will be presented and varieties of media encouraged. A model will be employed.

Art 165. BEGINNING LANDSCAPE PAINTING. (U,G)

2 hours credit. Open to all students. M T W Th F 8-10 plus independent work. Franklin 316.

Studio and outdoors painting dealing with a study of spatial and color relations in landscape painting.

Art 175. ADVANCED PAINTING. (U,G)

2 hours credit. Open to students with previous studio experience. M T W Th F 10-12 plus independent work. Franklin 316.

The course permits the student to develop his own inclinations while giving him an opportunity to have a close contact with a visiting critic-painter.

Art 185. SCULPTURE. (U,G)

2 hours credit. Open to all students. M T W Th F 8-10 plus independent work. Foundry.

Individual assignments and criticism for students of all levels of experience.

Art 195. METHODS AND MATERIALS OF SCULPTURE. (U,G)

2 hours credit. Open to all students. M T W Th F 10-12 plus independent work. Foundry.

An introduction to the carving of wood and stone; casting and carving of concrete; optional work in other media.

History and Appreciation

Hist. of Art 204. INTRODUCTION TO RENAISSANCE AND MODERN ART. (U,G)

3 hours credit. M T W Th F 11-12:15. Goldwin Smith 24. 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.

Hist. of Art 263. 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 204. No practice of art is involved.

BACTERIOLOGY

*Bact. 201. 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.

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. 202. GENERAL BACTERIOLOGY. (U,G)

3 hours credit. Lectures, M T W Th F 1:45-3. Stocking 119.

The lecture part of Course 201. Registration with permission of the instructor.

*Bact. 206. 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.

The laboratory part of Course 201. Fee, \$10.

BIOCHEMISTRY

Bioch. 400. GENERAL BIOCHEMISTRY. (U,G)

4 hours credit. Prerequisite, organic chemistry. Lectures, M T W Th F 8-10. Riley-Robb 105.

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

*Bioch. 401. GENERAL BIOCHEMISTRY. (U,G)

2 hours credit. Prerequisite, quantitative analysis and, parallel, Course 400. Laboratory, M T W Th F 10-12:30. Wing 106, 107. Mrs. Nolan and assistants.

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

BIOLOGY

*Biology 305. LABORATORY METHODS IN BIOLOGY. (U,G)

3 hours credit. Prerequisites, Biology 102, Botany 102, or Zoology 102 or 104 or their equivalents. Lecture and laboratory, M T W Th F 9:30-12. Roberts 302. Mr. Linzey.

For students who intend to teach or follow some phase of biology as a profession. Subjects covered: collection, preservation, and storage of biological specimens; the preparation of bird and mammal skins for study; injection of blood vessels of the frog; clearing and staining of small vertebrates; and the preparation and staining of squashes, smears, whole mounts, and sections. Fee, \$10.

(See also Other Programs, pages 73, 74.)

BOTANY

*Bot. 101u. INTRODUCTORY BOTANY. (U,G)

3 hours credit. *June 29 to July 22.* Lectures, M T W Th F 9 and 2. Plant Science 143. Laboratory, M T W Th F 10-12:30. Plant Science 240, 242. Mr. Basson and assistants.

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 101 is devoted to a study of growth in the flowering plants, with emphasis placed on structure, function, and reproduction. Fee, \$10.

*Bot. 102u. INTRODUCTORY BOTANY. (U,G)

3 hours credit. *July 25 to August 12.* Lectures, M T W Th F 9 and 2. Plant Science 143. Laboratory, M T W Th F 10-12:30. Plant Science 240, 242. Mr. Basson and assistants.

Botany 102 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.

CHEMISTRY

Students and members of the teaching staff are required to wear either prescription glasses or safety glasses in all chemistry laboratories.

*Chem. 103u. INTRODUCTION TO CHEMISTRY. (U)

3 hours credit. *June 29-July 22.* Prerequisite: at least 2 units of mathematics. No prior course in chemistry is prerequisite, but one unit or more of secondary-school chemistry is recommended. Registration permitted only to students who register also for Chem. 104u. Lectures, M T W Th F 8-9:50. Baker 207. Recitation, M T W Th F 10-10:45. Baker 207, 302, 316, and 18. Laboratory, M T W Th F 10:45-1. Baker 150.

An introduction to chemistry, with emphasis on the important principles and facts of inorganic and organic chemistry. Texts: Sienko and Plane, *Chemistry* (3rd ed.); Sienko and Plane, *Experimental Chemistry* (3rd ed.). Fee, \$7.50.

*Chem. 104u. INTRODUCTION TO CHEMISTRY. (U)

3 hours credit. *July 25-August 12.* Prerequisite: Chem. 103u or its equivalent. Lectures, M T W Th F 8-9:50. Baker 207. Recitation, M T W Th F 10-10:45. Baker 207, 302, 316, and 18. Laboratory, M T W Th F 10:45-1. Baker 150.

A continuation of Chemistry 103u. If passed with a grade of 70, this course serves as a prerequisite for Chemistry 205 or Chemistry 353. Texts: as listed above for Chemistry 103u. Fee, \$7.50.

*Chem. 205. QUALITATIVE INORGANIC ANALYSIS AND IONIC EQUILIBRIUM. (U,G)

4 hours credit. Prerequisite: Chemistry 104 with a grade of 70 or better, or

its equivalent. Lectures, M T W Th F 8. Baker 22. Laboratory, any three hours daily between 9 and 1. Baker 50.

Application of the theory of chemical equilibrium to the properties and reactions of the ions of selected elements, and the separation and detection of these ions in solution. Text: King, *Qualitative Analysis and Electrolytic Solutions*. Fee, \$10.

*Chem. 236. INTRODUCTORY QUANTITATIVE ANALYSIS. (U,G)

4 hours credit. Prerequisite Chemistry 205 or 108 or 116 or their equivalent. Required of candidates for the degree of A.B. with a major in chemistry. Lectures, M T W Th F 8. Baker 206. Laboratory, any three hours daily between 9 and 1. Baker 252.

A study of the fundamental principles of quantitative chemistry. Laboratory experiments are designed to illustrate basic principles and practice of quantitative procedures. Text: Blaedel and Meloche, *Elementary Quantitative Analysis*. Fee, \$15.

Chem. 353. ELEMENTARY ORGANIC CHEMISTRY. (U,G)

4 hours credit. Prerequisite: Chemistry 104 at a grade of 70, or 108 or 116, or their equivalent. Chemistry 355 must be taken concurrently with Chemistry 353. Primarily for students in the premedical and biological curricula. The student should determine the entrance requirements for the particular medical school he wishes to enter. Lectures, M T W Th F 8-10. Baker 107.

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: Morrison and Boyd, *Organic Chemistry*.

*Chem. 355. ELEMENTARY ORGANIC LABORATORY. (U,G)

2 hours credit. Must be taken with Chemistry 353. Laboratory, M T W Th F 10-12:50. Baker 250.

Laboratory experiments on the preparation and reactions of typical aliphatic and aromatic organic compounds. Text: Adams, Johnson, and Wilcox, *Laboratory Experiments in Organic Chemistry* (5th ed.). Fee, \$15.

CLASSICS

Greek

Greek 101. GREEK FOR BEGINNERS. (U)

3 hours credit. M T W Th F 8-9:15 and 11-12:15. Goldwin Smith 124. Mr. Spofford.

Introduction to Attic Greek. Designed to enable the student to read the ancient authors as soon as possible. Must be taken with Greek 103.

Greek 103. ATTIC GREEK. (U)

3 hours credit. M T W Th F 8-9:15 and 11-12:15. Goldwin Smith 124. Mr. Spofford.

Readings from Plato. Must be taken with Greek 101.

Latin

Latin 105. LATIN FOR BEGINNERS. (U)

3 hours credit. M T W Th F 8-9:15 and 11-12:15. Goldwin Smith 120A. Mr. Mitchell.

An introductory course in the essentials of the Latin language, designed for rapid progress toward reading the principal Latin authors. Must be taken with Latin 106.

Latin 106. LATIN FOR BEGINNERS. (U)

3 hours credit. M T W Th F 8-9:15 and 11-12:15. Goldwin Smith 120A. Mr. Mitchell.

Selected readings. Must be taken with Latin 105.

Latin 107. SELECTIONS FROM CICERO AND CATULLUS. (U)

3 hours credit. Prerequisite, Latin 106 or two units of entrance Latin; may also be taken by those seeking qualification in Latin. M T W Th F 9:30-10:45. Goldwin Smith 120A. Mr. Rudall.

A considerable amount of review in the fundamentals of Latin will be included.

CONSERVATION

(See Other Programs, pages 66, 67, 69.)

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 Session and in other special programs.

Richard C. Anderson, Associate Professor of Psychology, University of Illinois, Urbana, Illinois

Mark Beach, Assistant Professor of Education, State University of New York at Plattsburgh, Plattsburgh, New York

Clyde W. Bresce, Director of Guidance, Athens Area Schools, Athens, Pennsylvania

Francis P. Hodge, Assistant Professor of Education, State University College, Oswego, New York

Carroll J. Johnson, Superintendent of Schools, White Plains, New York

Louis M. Klein, Superintendent of Schools, Harrison, New York

James I. Mason, Superintendent of Schools, Ithaca, New York

Kenneth Morse, Professor of Education and Director of Guidance and Testing, Eastern Michigan University, Ypsilanti, Michigan

Gerald R. Rising, Mathematics Director, Minnecmath Center, University of Minnesota, Minneapolis

John Skawski, Superintendent of Schools, Peekskill, New York

Administration and Supervision

R.E. 561. THEORY AND PRACTICE OF ADMINISTRATION. (G)

3 hours credit. M T W Th F 11-12:15. Warren 201. Messrs. Klein, Johnson, and Skawski.

A basic course in the theory and processes common to a variety of administrative positions both within the school system and elsewhere. Both the science and the art of administration are examined. Theory is employed in group analysis of case studies. This course is required for certification in administration.

R.E. 562. SECONDARY SCHOOL PRINCIPALSHIP. (G)

3 hours credit. M T W Th F 8-9:15. Warren 37. Messrs. Klein, Johnson, and Skawski.

The responsibilities of the secondary school principal within the school building. Special attention will be given to the problems of the six-year high school.

R.E. 564. SCHOOL FINANCE AND FACILITIES. (G)

3 hours credit. M T W Th F 9:30-10:45. Warren 201. Mr. Mason.

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

I&L.R. 451. DYNAMICS OF OCCUPATION STRUCTURES IN WORK ORGANIZATION (See page 55.)

Agricultural Education

(See Other Programs, page 64.)

Curriculum and Instruction

Ed. 440E. TEACHING OF ENGLISH IN SECONDARY SCHOOLS. (U,G)

3 hours credit. M T W Th F 12:30-1:45. Warren 232. Miss Peard.

To meet teacher certification requirements and needs of experienced teachers. Emphasis on the teaching of reading, writing, and language.

R.E. 441. CHILDREN'S LITERATURE. (U,G)

3 hours credit. M T W Th F 12:30-1:45. Warren 201. Mr. Hodge.

Designed for graduate students; open to undergraduates with consent of instructor. A critical study of literature for children in elementary and secondary schools, considered in relation to historical, critical, and literary uses of literature with children. Offered only in the Summer Session.

R.E. 444. MODERN VIEWS AND MEANS FOR THE TEACHING OF MATHEMATICS. (U,G)

3 hours credit. M T W Th F 8-9:15. Warren 260. Mr. Rising.

Open to experienced teachers and supervisors only. Attention will be

given to recent developments in mathematics education and to various proposals for curriculum revision. Materials and practical techniques for effective teaching of mathematics in elementary and secondary schools will be considered. Special interests of students will serve as a guide for the further selection of topics. A mathematics laboratory will be provided for use by students in the course.

Ed. 445. TEACHING READING AND STUDY SKILLS IN THE SECONDARY SCHOOL. (U,G)

3 hours credit. M T W Th F 9:30-10:45. Warren 260. Mr. Hodge.

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

Ed. 641. SEMINAR IN SOCIAL STUDIES EDUCATION. (G) (See page 66.)

Educational Psychology and Measurement

R.E. 417. PSYCHOLOGY OF ADOLESCENCE. (U,G)

2 hours credit. M T W Th F 1. Warren 160. Mr. Fernald.

Designed especially for secondary school teachers (grades 7-12) and guidance counselors, but applicable to all adults who work with adolescents. The major objectives 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. 453. INTRODUCTION TO EDUCATIONAL STATISTICS. (U,G)

3 hours credit. M T W Th F 8-9:15. Warren 232. Mr. Morse.

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

R.E. 511. EDUCATIONAL PSYCHOLOGY. (G)

3 hours credit. M T W Th F 2-3:15. Warren 232. Mr. Anderson.

Includes consideration of basic theoretical issues and relevant evidence in respect to learning, perception, cognition, motivation, ability structure, and attitudes. Trends in thinking and research most likely to influence educational policy will be the focal points for intensive reading and class discussion.

Ed. 555. USE AND INTERPRETATION OF TESTS IN GUIDANCE AND PERSONNEL ADMINISTRATION. (G)

3 hours credit. M T W Th F 8, third hour to be arranged. Warren 160. 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.

Ed. 618. SEMINAR IN EDUCATIONAL PSYCHOLOGY: PROGRAMMED INSTRUCTION. (G,U by permission)

3 hours credit. M T W Th F 11-12:15. Warren 260. Mr. Anderson.

Includes consideration of techniques of analysis of educational objectives, task and functional analysis, frame design, and program evaluation and revision. Readings and classwork will also deal with theory and current research.

Guidance and Personnel Administration

R.E. 582 EDUCATIONAL AND VOCATIONAL GUIDANCE. (G)

2 hours credit. M T W Th F 11. Warren 232. 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. 583. COUNSELING. (G)

2 hours credit. M T W Th F 9. Warren 160. Mr. Bresee.

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

R.E. 585. OCCUPATIONAL AND EDUCATIONAL INFORMATION. (G)

4 hours credit. M T W Th F 12. Additional hour arranged. Field trips and workshop periods, T and Th 2-4:15. Warren 160. Mr. Fernald.

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

R.E. 587. PRACTICUM IN MEASUREMENT AND APPRAISAL FOR COUNSELORS. (G)

2 hours credit. M T W Th F 10. Warren 160. Mr. Andrus.

An advanced course in the use of tests and test results in the psychological appraisal of individuals. Emphasis will be placed on 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.

I.&L.R. 451. DYNAMICS OF OCCUPATION STRUCTURES IN WORK ORGANIZATION. (See page 55.)

See also course offerings in Educational Psychology and Measurement, Mental Health, and Psychology. See also Other Programs, page 67.

Guidance courses tentatively scheduled for the Summer Session of 1967: Educational and Vocational Guidance, Group Techniques in Guidance, Organization and Administration of Guidance Programs, Case Studies in Counseling.

History, Philosophy, and Sociology of Education

R.E. 470. SOCIAL AND PHILOSOPHICAL FOUNDATIONS OF EDUCATION. (U,G)

3 hours credit. M T W Th F 12:30-1:45. Warren 260. Mr. Beach.

A study of the persistent problems of education in a democracy.

Ed. 472. PHILOSOPHERS ON EDUCATION. (U,G)

3 hours credit. M T W Th F 8-9:15. Warren 201. Miss Peard.

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

R.E. 574. HISTORY OF EDUCATION IN THE MODERN PERIOD. (G,U by permission)

3 hours credit. M T W Th F 9:30-10:45. Warren 37. Mr. Beach.

A history of American education from the beginning of the seventeenth century to the present, with emphasis on the interrelationships of social thought on educational policies and programs.

Soc. 342. EDUCATIONAL SOCIOLOGY. (U,G) (See page 60.)

Home Economics Education

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. 433u. TEACHING HOME ECONOMICS AT THE SECONDARY SCHOOL LEVEL. (See Other Programs, page 72.)

H.E. Ed. 533u. TEACHING HOME ECONOMICS TO DISADVANTAGED YOUTH. (See Other Programs, page 72.)

H.E. Ed. 535u. TEACHING MANAGEMENT OF WORK IN THE HOME. (See Other Programs, page 72.)

Reading and Study Skills

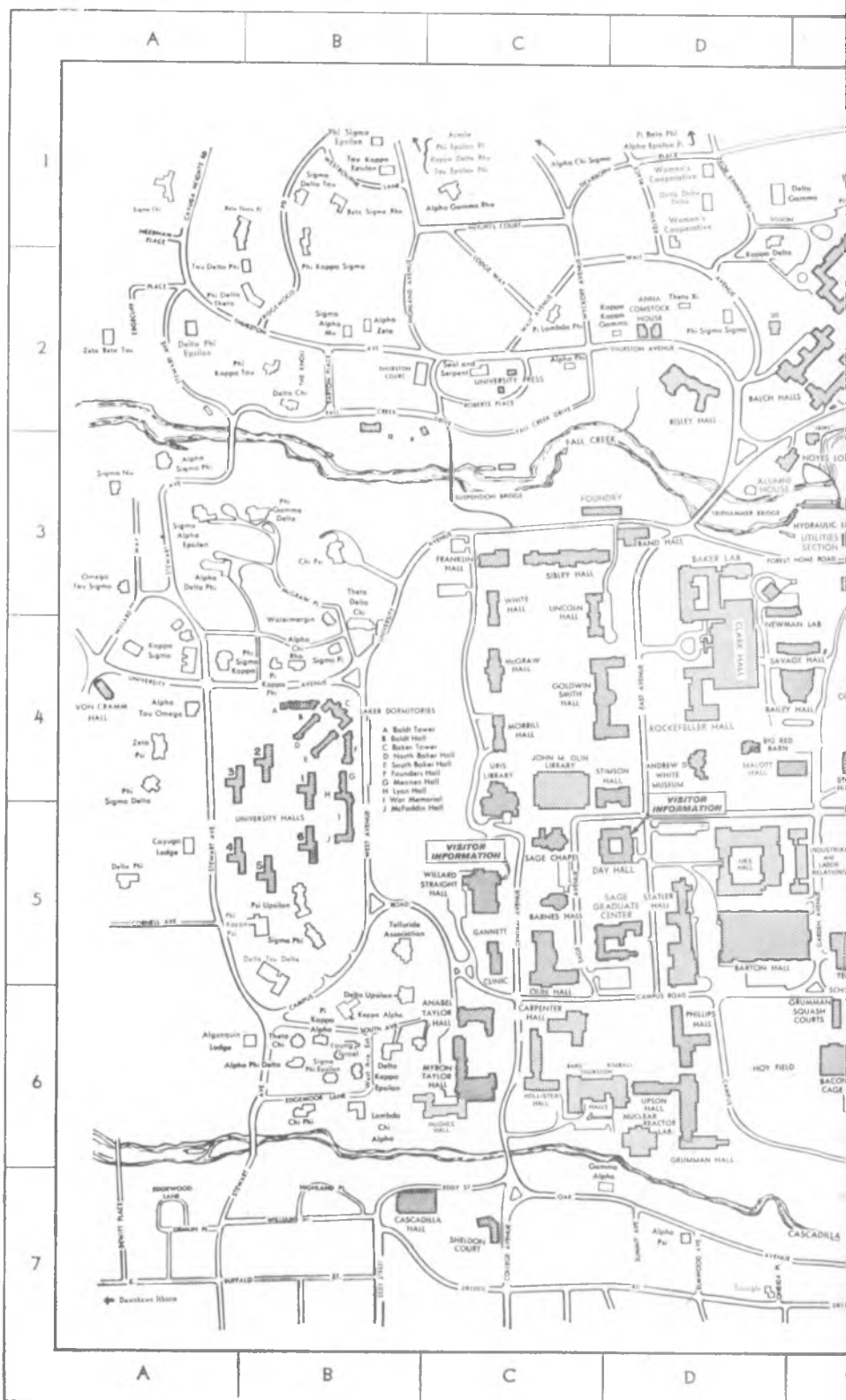
*Ed. 7u. COLLEGE READING AND STUDY SKILLS. (U,G)

Noncredit. July 5 - August 4. T Th or M W 2-3:30. Reading-Study Center, ILR Building E. Mr. D'Elia and Mr. Wuerthner.

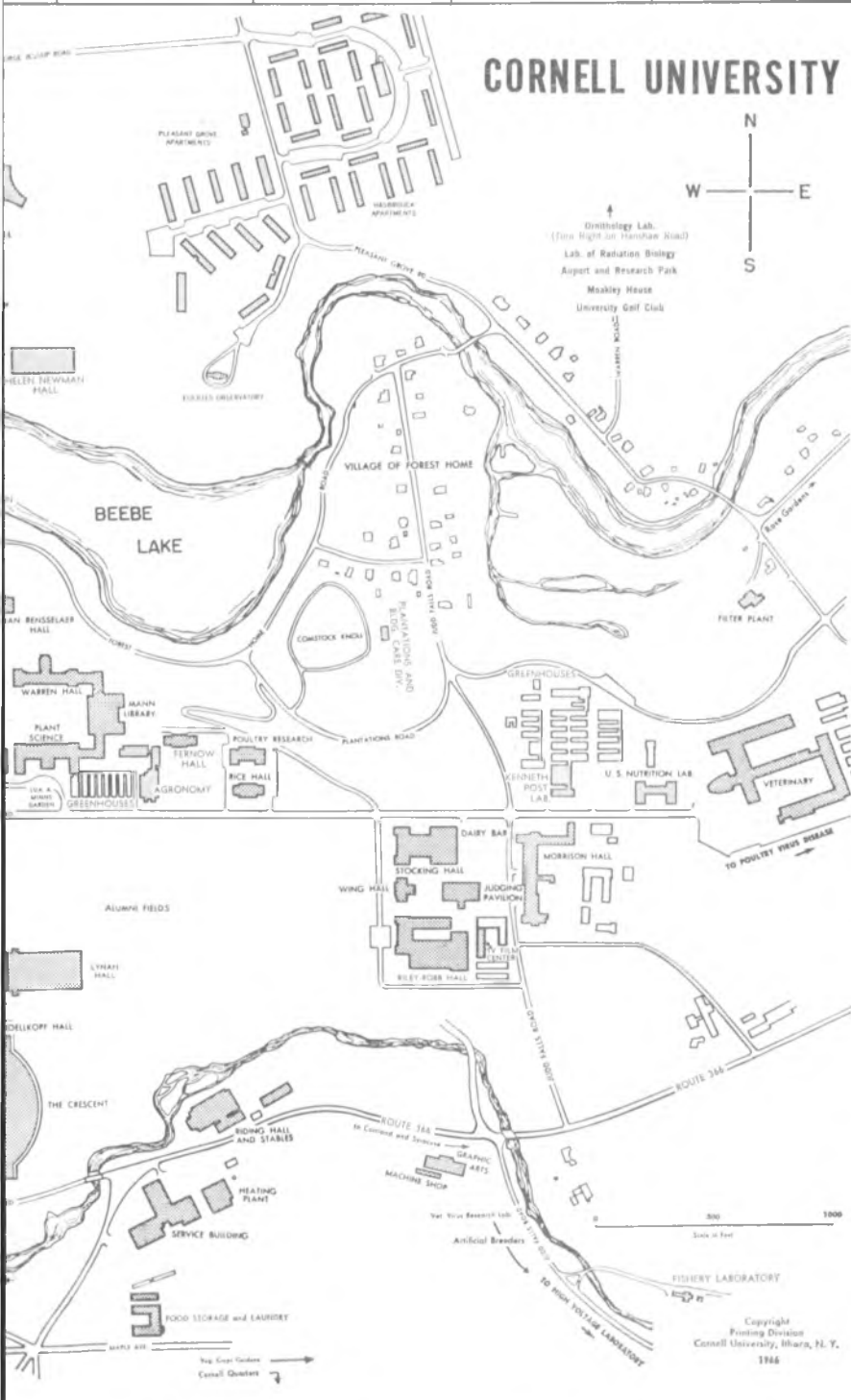
The aim is the improvement of reading and study skills. In the area of *study skills*, students receive instruction on how to read and master the textbook assignments, to take notes on textbooks and lectures, to prepare for and take examinations, and to schedule their time. In the area of *reading*, students learn to improve both their reading comprehension and reading speed. Comprehension topics include: how to recognize organizational patterns; how to distinguish organizational patterns; how to distinguish main ideas from supporting materials; how an author clarifies his organization

KEY TO THE CAMPUS MAP ON THE PAGES FOLLOWING

- Agronomy Lab. F4
 Alumni (Athletic) Fields F5
 Artificial Breeders H7
 Bacon Athletics Cage E6
 Bailey Hall D4, auditorium
 Baker Residences (men) B4
 Baker Laboratory D3, chemistry
 Balch Halls D2, women's residences
 Bard Hall C6, materials science & eng.
 Barnes Hall C5, Campus Store, auditorium
 Barton D5, military training, Safety Div.
 Big Red Barn D4, alumni center
 Caldwell Hall E4, agronomy
 Campus Store C5, Barnes; C7, Sheldon Ct.
 Carpenter C6, eng. library & admin.
 Cascadilla Hall B7
 Clark Hall D4, physical sciences
 Collyer Boat House, Cayuga Lake Inlet
 Comstock Hall F4, entomology, limnology
 Comstock House D2, women's residence
 Cornell Quarters G7, student families
 Crescent E6, football stadium
 Dairy Bar Cafeteria (Stocking Hall) H5
 Day Hall D5, Univ. administration
 Dickson Hall E2, women's residence
 Donlon Hall E1, women's residence
 Educ. Placement D2, 320 Wait Av.
 Fernow Hall F4, conservation
 Filter Plant J4
 Fishery Lab. J7
 Food Storage & Laundry F7
 Foundry C3, architecture studio
 Franklin Hall C3, art, Asian studies
 Gannett Medical Clinic C5
 Goldwin Smith Hall C4, arts & sciences
 Golf Course H2
 Graphic Arts Services G6
 Greenhouses F4, H4
 Grumman D6, aero. eng.
 Grumman Squash Courts E6
 Hasbrouck Apts. G1, student residences
 Heating Plant F6
 High Voltage Lab. H7, 909 Mitchell St.
 Hollister Hall C6, civil eng.
 Hoy Field D6, baseball
 Hughes Hall C6, law student residence
 Hydraulics (Applied) Lab. E3
 Ind. & Labor Relations Conf. Ctr. E5
 Ives Hall D5, industrial & labor relations,
 summer session & extramural courses,
 Univ. personnel office
 "Japes" E2, recreation, meetings
 Judging Pavilion H5
 Kimball Hall D6, materials processing
 Library (McGraw) Tower C4
 Lincoln Hall C3, music, speech & drama
 Lynah Hall E5, ice skating
 Malott Hall D4, business & public ad-
 min., hospital admin.
 Mann F4, agric.-home econ. library, Fi-
 nance Office, Bailey Hortorium
 McGraw Hall C4, geological sciences, so-
 ciology, anthropology
 Minns Garden E4
 Moakley House H2, recreation center,
 golf
 Morrill Hall C4, modern languages, psy-
 chology
 Morrison Hall H5, animal husbandry
 Newman (Helen) Hall E2, women's phys.
 ed.
 Newman Lab. D3, nuclear studies
 Noyes Lodge E3, recreation, cafeteria
 Nuclear Reactor Lab. D6
 Observatory I2
 Olin Hall C6, chemical engineering
 Olin (Grad. & Research) Library C4
 Ornithology H1-2, Sapsucker Woods Rd.
 via Warren & Hanshaw Rds.
 Phillips D6, elec. eng.
 Plant Science E4, genetics, development,
 physiology, cell physiology
 Pleasant Grove Apts. F1, student families
 Post Lab. H4, floriculture
 Poultry Research F4
 Poultry Virus Disease Lab. J5
 Radiation Biology Lab. H2, Warren Rd.
 Rand D3, Computing Ctr.
 Rice Hall F4, poultry husbandry
 Riding Hall & Stables F6, Rt. 366
 Riley-Robb Hall G5, agric. eng.
 Risley Hall D2, women's residence
 Roberts Hall E4, agric. admin., biol. sci-
 ences, veg. crops
 Rockefeller Hall D4, physics, eng. physics
 Rose Gardens, road to, J3
 Sage Chapel C5
 Sage Graduate Center D5
 Savage Hall D4, nutrition
 Schoellkopf Field and Hall E6, athletics
 Service Building F7
 Sheldon Ct. C7, News Bureau, Campus
 Store, Special Events
 Sibley Hall C3, architecture, history, govt.
 Statler Hall D5, hotel administration
 Stimson Hall D4, ecology & systematics
 Stocking Hall G5, dairy & food science,
 neurology & behavior, microbiology
 Stone Hall E4, education
 Suspension Bridge C3
 Taylor (Anabel) Hall C6, interfaith ctr.
 Taylor (Myron) Hall C6, law
 Teagle Hall E5, men's phys. ed., sports
 Thurston Court B2, student residences
 Thurston Hall C6, theoretical & applied
 mechanics
 Toboggan Lodge E3, recreation
 Triphammer Bridge D3
 University Halls B5, men's residences
 University Press C2
 Upson Hall D6, mech. eng., computer sci.
 Uris (Undergraduate) Library C4
 U. S. Nutrition Lab. H4
 Utilities Section E3
 Van Rensselaer Hall F4, home economics
 Vegetable Gardens G7
 Veterinary College J4
 Veterinary Virus Research Lab. H7
 Visitor Information C5 and D5
 von Cramm Scholarship Hall (men) A4
 Warren E4, agric. econ., rural sociol.
 White Hall C3, mathematics
 White Museum of Art D4
 Willard Straight Hall C5, student union
 Wing Hall G5, biochem., molec. biol.



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1946

through the use of transitions, introductions, and summaries; how to determine the author's tone and intention; and how to detect bias. As part of their training in speed-reading, students will work daily with speed-reading machines in the reading laboratory.

Students may register for this special course in Lynah Hall on registration day. A fee of \$52.50 will be payable at this time. For additional information, address Professor Walter Pauk, Director, Reading-Study Center, 101 ILR Building E, Cornell University, Ithaca, New York 14850.

Science Education

R.E. 409. OUR PHYSICAL ENVIRONMENT. (U,G)

3 hours credit. Lectures, M W Th F 9:30-10:45. Laboratory, W 2-4:30. Stone 7. Mr. M. Bruce.

Designed for elementary and junior high school teachers, this is a study of the commonplace machines and materials in our physical environment and their effectiveness in demonstrating basic scientific principles. Frequent field trips and first-hand examination will be used in studying air, water, soil, light and sound, as well as some elementary mechanical and electrical devices. Emphasis will be placed on the physical environment as an aid to teaching the physical sciences in the public schools.

*R.E. 426. FIELD NATURAL HISTORY. (U,G)

3 hours credit. Lectures, T Th 1:40-3. Laboratory, T Th 3-5:30. Stone 7. Mr. Rockcastle.

Devoted to studies of local plants, animals, and the biological and physical environment including ecology and relations to humans. Applications to teaching science and conservation are emphasized. Fee, \$1.

R.E. 507. METHODS OF TEACHING SCIENCE IN SECONDARY SCHOOLS. (U,G)

3 hours credit. Lectures, M T W Th F 12:30-1:45. Laboratory, M 3-5. Stone 7. Mr. Parakh.

A consideration of problems of selection and organization of subject matter, of choice and use of materials, and of methods of teaching sciences at the secondary school level. Development of instructional materials will be an important part of this course.

Research and General

R.E. 499. INFORMAL STUDY IN EDUCATION. (U)

Credit as arranged. Members of the staff of the Department of Rural Education.

Ed. 499S. INFORMAL STUDY IN EDUCATION. (U)

Credit as arranged. Members of the staff of the School of Education.

R.E. 500. SPECIAL STUDIES IN EDUCATION. (G)

Credit as arranged. Members of the staff of the Department of Rural Education.

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

Ed. 500S. 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 with the staff members concerned. Limited to graduate students registered in the endowed division of the School of Education.

Other Programs for Teachers

Agricultural Education. (See page 64.)

American Government Institute. (See page 76.)

American History Institute. (See page 76.)

Area Study Programs for Secondary School Teachers. (See page 66.)

Disadvantaged Youth Workshop. (See page 67.)

Field Studies in Natural Resources Conservation. (See page 69.)

Food and Nutrition. (See page 71.)

Home Economics Education. (See page 72.)

Textiles and Clothing. (See page 73.)

N. Y. State Regional Science Institute in Biology. (See page 74.)

ENGLISH

Engl. 111. INTRODUCTION TO ENGLISH. (U)

3 hours credit. Open only to high school graduates admitted to a college or university for the fall term of 1966. Three sections of not more than 20 students each. M T W Th F 8-9:15, 9:30-10:45, or 11-12:15. Goldwin Smith 177. Messrs. Elledge, Jenkins, and Ohmann.

The course will consist of a series of exercises in writing and in the analysis of written English discourse. The emphasis will be on "invention," or how writers find things to say.

Successful completion of this course will satisfy one term of the two-term requirement in humanities for Cornell freshmen. Prospective applicants who have been admitted to a college other than Cornell University should consult with their institution about transfer of credit earned.

To provide a normal 6 credit-hour program in the Summer Session, students are expected to elect an additional freshman-level course, e.g., Latin 107, French 112 or 201, German 112 or 201, Math. 111 or 112. Other possible electives are Govt. 101, Music 101, Philos. 101, Psych. 101, Sociol. 101.

Engl. 305. ADVANCED COMPOSITION. (U,G)

3 hours credit. Prerequisite, satisfactory completion of a year's work in freshman English or its equivalent. M T W Th F 11-12:15. Goldwin Smith 246. Mrs. Herz.

A course in non-creative prose for students seeking additional practice in written expression. Papers and individual conferences.

Engl. 309. THE RENAISSANCE. (U,G)

4 hours credit. M T W Th F 9:30-10:45. Goldwin Smith 227. Mr. Ogden.

The main traditions in English poetry from 1530 to 1660, with special attention to the achievements of such poets as Wyatt, Surrey, Sidney, Spenser, Marlowe, Shakespeare, Donne, Jonson, Herbert, and Marvell. Background readings in the prose of the period.

Engl. 317. THE ROMANTIC POETS. (U,G)

4 hours credit. M T W Th F 11-12:15. Goldwin Smith 162. Mr. Ogden.

The nature of Romanticism arrived at through a reading of the major poets: Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats.

Engl. 324. THE ENGLISH NOVEL IN THE NINETEENTH CENTURY. (U,G)

4 hours credit. M T W Th F 9:30-10:45. Goldwin Smith 128. Mrs. Herz.

A survey of the novel in England from Jane Austen to Thomas Hardy.

Engl. 333. MAJOR AMERICAN WRITERS OF THE NINETEENTH CENTURY. (U,G)

4 hours credit. M T W Th F 9:30-10:45. Goldwin Smith 156. Mr. Jones.

A survey of the tradition of American literature of the last century through a critical study of selected works by Irving, Cooper, Poe, Emerson, Thoreau, Hawthorne, Whittier, Lowell, Longfellow, Whitman, and Twain.

Engl. 338. THE MODERN ENGLISH NOVEL. (U,G)

4 hours credit. M T W Th F 11-12:15. Goldwin Smith 164. Mr. Kleine.

A critical survey of selected major novels by such representative twentieth-century novelists as Conrad, Ford, Joyce, Lawrence, Woolf, among others.

Engl. 343. FORMS OF FICTION. (U,G)

3 hours credit. M T W Th F 1:30-2:45. Goldwin Smith 128. Mr. Kleine

The short story and the novella as developed by Chekhov, Joyce, Mansfield, Hemingway, Faulkner, Welty, and others.

Engl. 345. MODERN DRAMA. (U,G)

3 hours credit. M T W Th F 9:30-10:45. Goldwin Smith 236. Mr. Partridge.

A study of the major playwrights of this century, with some attention to continental backgrounds and special emphasis on Shaw, Yeats, O'Casey, O'Neill, and Miller.

Engl. 366. CHAUCER. (U,G)

4 hours credit. M T W Th F 9:30-10:45. Goldwin Smith 164. Mr. Blyth.

Reading and critical analysis of *Troilus and Criseide* and selections from the *Canterbury Tales*.

Engl. 368. SHAKESPEARE. (U,G)

4 hours credit. M T W Th F 11-12:15. Goldwin Smith 156. Mr. Partridge.

An introduction to the works of Shakespeare, based on a selection of comedies, histories, and tragedies representative of the stages of his artistic development and the range of his dramatic achievement.

Engl. 385. CREATIVE WRITING. (U,G)

4 hours credit. Prerequisite, previous work in creative writing or consent of the instructor. M T W Th F 11-12:15. Goldwin Smith 236. Mr. Katz.

Discussion of students' fiction and poetry, with examination of models from contemporary literature.

Engl. 419. MAJOR VICTORIAN AUTHORS. (U,G)

4 hours credit. M T W Th F 8-9:15. Goldwin Smith 162. Mr. Jones.

A critical study of major works by Wordsworth, Carlyle, Tennyson, Dickens, Arnold, and Mill. The readings are designed to explore a central problem in the Victorian world: self-development.

Engl. 449. MODERN AMERICAN POETRY. (U,G)

4 hours credit. M T W Th F 9:30-10:45. Goldwin Smith 162. Mr. Katz.

A critical survey of contemporary American poetry, with a close examination of the influence by such writers as Frost, Pound, Eliot, Stevens, and Hart Crane.

Engl. 920. RESEARCH AND GUIDANCE. (G)

Hours and credit to be arranged. Mr. Caputi.

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

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 or 112 on the basis of College Entrance Examination Achievement scores which they must make available before registration.

Non-Cornell students who cannot submit CEEB scores must supply transcripts showing amount of language work done and report to the Division of Modern Languages for proper placement at the time of registration.

For languages other than the following, see pages 67 to 69.

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. 112. FRENCH. (U)

3 hours credit. Prequalification course for students with the level of placement above French 102. M T W Th F 10-12. Morrill Hall. Mr. Leonard.

Fr. 151u. FRENCH. (G)

3 hours credit. *June 29 through July 22.* For graduate students acquiring reading proficiency. Twenty hours of instruction each week. Morrill Hall. Mr. Leonard and staff.

Fr. 152u. FRENCH. (G)

3 hours credit. *July 25 through August 12.* For graduate students acquiring reading proficiency. Prerequisite, French 151, or one year of college French, or two years of high school French. Twenty hours of instruction each week. Morrill Hall. Mr. Leonard and staff.

French 201. INTRODUCTION TO FRENCH LITERATURE. (U,G)

3 hours credit. Prerequisite, for Cornell undergraduates, satisfactory qualifying examination; for others, 4 years of high school French or consent of the instructor. Course 201 is prerequisite to 202. M T W Th F 8-9:15. Goldwin Smith 242. Mr. Brogyanyi.

Serves as an intermediate reading course and as an introduction to literature. Complete works are read representing significant writings from the Middle Ages to the present: such poets and playwrights as Ronsard, La Fontaine, Baudelaire, Mallarmé, Corneille, Molière, and Racine. The object is to acquire reading facility while developing a critical appreciation of a foreign literature.

French 202. INTRODUCTION TO FRENCH LITERATURE. (U,G)

3 hours credit. Prerequisite, for Cornell undergraduates, French 201; for others, 4 years of high school French or consent of the instructor. M T W Th F 11-12:15. Goldwin Smith 242. Mr. Brogyanyi.

Serves as an intermediate reading course and as an introduction to literature. Complete works are read representing significant writings from the Middle Ages to the present: the prose writings of such authors as Montaigne, Rabelais, Proust, and Sartre. The object is to acquire reading facility while developing a critical appreciation of a foreign literature.

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

Germ. 112. GERMAN. (U)

3 hours credit. Prequalification course for students with the level of placement above German 102. M T W Th F 8-10. Morrill Hall. Mr. Puryear.

Germ. 151u. GERMAN. (G).

3 hours credit. *June 29 through July 22.* For graduate students acquiring reading proficiency. Twenty hours of instruction each week. Morrill Hall. Mr. Puryear and staff.

Germ. 152u. GERMAN. (G)

3 hours credit. *July 25 through August 12.* For graduate students acquiring reading proficiency. Prerequisite, German 151 or one year of college German or two years of high school German. Twenty hours of instruction each week. Morrill Hall. Mr. Puryear and staff.

Italian

Ital. 221. ELEMENTARY ITALIAN. (U)

3 hours credit. Prerequisite, for Cornell undergraduates, satisfaction of the language requirement in a Romance language or Latin; for others, permis-

sion of the instructor. Must be taken with Italian 222. Twenty hours of instruction each week. Morrill Hall. Mr. Chiarenza.

Ital. 222. ELEMENTARY ITALIAN. (U)

3 hours credit. Must be taken with Ital. 221. Mr. Chiarenza.

Russian

Russ. 101. RUSSIAN. (U)

6 hours credit. Twenty hours of instruction each week. Morrill Hall. Mr. Leed and staff.

Russ. 102. RUSSIAN. (U)

6 hours credit. Prerequisite, Russian 101 or its equivalent. Twenty hours of instruction each week. Morrill Hall. Mr. Leed and staff.

Russ. 151u. RUSSIAN. (G)

3 hours credit. *June 29 through July 22.* For graduate students acquiring reading proficiency. Twenty hours of instruction each week. Morrill Hall. Mr. Leed and staff.

Russ. 152u. RUSSIAN. (G)

3 hours credit. *July 25 through August 12.* For graduate students acquiring reading proficiency. Prerequisite, Russian 151 or its equivalent. Twenty hours instruction each week. Morrill Hall. Mr. Saltarelli 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. Nasjleti 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. Nasjleti and staff.

For Spanish literature courses, see page 32.

GEOLOGY

*Geol. 101u. GENERAL GEOLOGY. (U)

3 hours credit. *June 29 to July 22.* Registration limited to 25 students. Lectures, M T W Th F 10-11:50. McGraw 165. Laboratory, M T W Th 1:30-4. McGraw 265. Mr. Wells and assistant.

An introduction to earth science: elements of mineralogy and lithology, earthquakes and interior of the earth, geologic processes and geomorphology, marine geology, and vulcanism. Field trips during certain laboratory periods. Text: Leet and Judson, *Physical Geology; Geology 101 Laboratory Manual*. Fee, \$10.

*Geol. 102u. GENERAL GEOLOGY. (U)

3 hours credit. July 25 to August 12. Prerequisite: Geology 101 or equivalent. Registration limited to 25 students. Lectures, M T W Th F 10-11:50. McGraw 165. Laboratory, M T W Th 1:30-4. McGraw 265. Mr. Wells and assistant.

Continuation of Geology 101: geologic structures and mountain-building, glaciation, and survey of earth history. Field trips during certain laboratory periods, and one all-day Saturday trip (July 30 or August 6). Text: Leet and Judson, *Physical Geology*; Dunbar, *Historical Geology*; *Geology 102 Laboratory Manual*. Fee, \$10.

GOVERNMENT

Gov. 101. AMERICAN GOVERNMENT. (U,G)

3 hours credit. M T W Th F 11-12:15. West Sibley 328. Mr. Hall.

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. 104. COMPARATIVE GOVERNMENT. (U,G)

3 hours credit. M T W Th F 8-9:15. West Sibley 221. Mr. Greene.

Analysis of the characteristics of contemporary political systems in the developed and underdeveloped areas of the world: factors of stability, party and electoral systems, role of ideology, predominance of executive power in the economically planned society.

Gov. 313. CONSTITUTIONAL LAW. (U,G)

4 hours credit. M T W Th F 9:30-10:45. West Sibley B-1. Mr. Heberle.

A study of the law of the American Constitution as this has been expounded by the Supreme Court. Emphasis will be placed on the various understandings of freedom that have inspired, or given rise to, that law. The course will be conducted primarily through class discussion of assigned cases.

Gov. 329. ADVANCED ANALYSIS OF AMERICAN POLICY-MAKING PROCESSES I. (U,G)

4 hours credit. Must be taken with Gov. 330. M T W Th F 2-5. West Sibley 328. Mr. Altshuler.

Contrasting selected domestic and national security policy arenas, the seminar will focus on variations in the patterns of institutional dominance—e.g., President vs. Congress, generalist politicians vs. experts—from one policy arena to another in American government, and from various past time periods to the present. Substantial attention will also be paid to the recent development of political theory on the subjects under discussion, and the complex interplay between theory and action in American politics.

Gov. 330. ADVANCED ANALYSIS OF AMERICAN POLICY-MAKING PROCESSES II. (U,G)

4 hours credit. Must be taken with Gov. 329. M T W Th F 2-5. West Sibley 328. Mr. Altshuler.

See Government 329 for description.

Gov. 344. GOVERNMENTS AND POLITICS OF SOUTHEAST ASIA. (U,G)

4 hours credit. M T W Th F 11-12:15. West Sibley 101. Mr. Silverstein.

Analysis of the organization and functioning of government and politics in

the countries of Southeast Asia, with attention given to the nature of the social and economic environments which condition them.

Gov. 530. SEMINAR IN AMERICAN GOVERNMENT AND THE ECONOMY. (U,G)

2 hours credit. Hours to be arranged. West Sibley 221. Mr. Hall.

An analysis of the policy-making processes and of the political issues associated with government efforts to influence or manage the American economy.

Gov. 555. SEMINAR IN POLITICAL THEORY. (U,G)

2 hours credit. Hours to be arranged. West Sibley 318. Mr. Heberle.

Analysis of selected texts in the history of political thought.

Gov. 574. SEMINAR IN COMMUNISM. (U,G)

2 hours credit. Hours to be arranged. West Sibley 101. Mr. Greene.

Survey of the theory and practice of communism, from antiquity to the present. Students will write a research paper concentrating on the characteristics of a contemporary communist system.

Gov. 644. SEMINAR IN POLITICAL PROBLEMS OF SOUTHEAST ASIA. (U,G)

2 hours credit. M T W Th F 2. West Sibley B1. Mr. Silverstein.

Special emphasis will be placed on the role of the military in the political process.

(See also *Other Programs*, pages 66, 67, 76.)

HISTORY

Hist. 216. HISTORY OF THE UNITED STATES, 1865 TO THE PRESENT. (U)

3 hours credit. M T W Th F 11-12:15. West Sibley B1. Mr. Somkin.

A survey of American history.

Hist. 324. HISTORY OF CHINA DURING THE NINETEENTH AND TWENTIETH CENTURIES. (U,G)

4 hours credit. M T W Th F 11-12:15. West Sibley 318. Mr. Clubb.

A study of the development of modern China with emphasis on twentieth-century changes. Domestic and foreign affairs will be treated. Lectures and discussions with a program of outside reading and papers.

Hist. 376. AMERICAN CULTURAL AND INTELLECTUAL HISTORY. (U,G)

4 hours credit. M T W Th F 8-9:15. West Sibley B1. Mr. Somkin.

The subject is the interplay between historical change in America and basic beliefs (particularly those concerning God and man, individual liberty and the good society) and the meaning of the historical past and future. The most reflective and articulate thinkers will receive more attention than will public opinion in a general sense. Topics will include Puritanism and

sectarianism, rationalism, and philosophic movements in the eighteenth century, and the Jeffersonian synthesis. Reading assignments will be made regularly.

Hist. 463. MODERN RUSSIAN HISTORY FROM THE LATE NINETEENTH CENTURY TO THE PRESENT. (U,G)

4 hours credit. M T W Th F 11-12:15. Goldwin Smith 227. Mr. Enteen.

A study of modern Russia with emphasis on the Soviet period. Lectures and discussions together with a program of outside reading and papers.

Hist. 480. SEMINAR IN RUSSIAN HISTORY. (G)

2 hours credit. M T W Th F 2. West Sibley, History Library. Mr. Enteen.

For graduate students who are taking History 463, and for other graduate students who have similar preparation.

Hist. 490. SEMINAR IN MODERN CHINESE HISTORY. (G)

2 hours credit. M T W Th F 2. West Sibley 221. Mr. Clubb.

For graduate students who are taking History 324, and for other graduate students who have similar preparation.

(See also Other Programs, pages 66, 67, 76.)

HOME ECONOMICS

Household Economics and Management

***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.Ed. 535u. TEACHING MANAGEMENT OF WORK IN THE HOME. (G)

Joint offering of the Department of Household Economics and Management and the Department of Home Economics Education. (See page 72.)

(See also Other Programs, page 72.)

Textiles and Clothing

T. & Clo. 170. TEXTILES. (U)

3 hours credit. No prerequisites. Designed for persons wishing to acquire a basic knowledge of textiles. Meets a graduation requirement in the College

of Home Economics and may be elected by students from other colleges. Registration limited to 20 students. Lecture and laboratory, M T W Th F 1-3. Van Rensselaer 234. Miss Stout.

An introduction to the study of textiles as one of the world's oldest crafts and as one of its major industries today. Emphasis is placed on the properties of textile materials in relation to their end uses, and in particular those uses where aesthetic qualities are required; where mechanical properties are important; where chemical, thermal, and other kinds of degradation are factors; and where launderability and cleanability are essential. Students are encouraged to explore independently the characteristics of a wide variety of textiles.

T. & Clo. 215u. APPAREL DESIGN: FLAT PATTERN DESIGNING. (U,G) (See Other Programs, page 73.)

T. & Clo. 323. ECONOMICS OF THE TEXTILE AND APPAREL INDUSTRIES. (U,G) .

3 hours credit. Prerequisites, one college course in textiles or permission of instructor, and two college courses in economics. M T W Th F 8-9:15. Van Rensselaer 311M. Miss Dardis.

Trends in the production and consumption of textiles and apparel; economic analysis of the textile and apparel industries; factors affecting changes in output, price, location, and market structure.

T. & Clo. 390u. SOCIO-ECONOMIC ASPECTS OF CLOTHING. (U,G)
(See Other Programs, page 73.)

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

Credit and hours arranged. Registration by permission of the graduate committee chairman and the instructor. Department faculty. Fee dependent on nature of problem.

HOTEL ADMINISTRATION

(See Other Programs, page 73.)

INDUSTRIAL AND LABOR RELATIONS

I. & L.R. 250. SURVEY OF INDUSTRIAL AND LABOR RELATIONS. (U,G)

3 hours credit. No prerequisites. M T W Th F 11-12:15. Ives 214. Mr. Korman.

An analysis of the major problems in industrial and labor relations: labor union history, organization, and operation; labor market analysis and 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. 451. DYNAMICS OF OCCUPATION STRUCTURES IN WORK ORGANIZATIONS. (U,G)

3 hours credit. No prerequisites. M T W Th F 9:30-10:45. Field trips to be arranged. Ives 218. Mr. Mesics.

This course is designed for vocational guidance counselors, school administrators, social studies teachers, and advanced undergraduate students whose interest is in preparation for secondary education or guidance. It is concerned with the economic and social environment in which work is performed in industrial society and with the technological factors which influence change in the U.S. occupational structure. Emphasis is placed on the changing nature of work and on the consequent composition and distribution of the work force. Particular attention is accorded to occupational information embraced in technician, skilled worker, and semiskilled categories.

I. & L.R. 462. MOTIVATION AND MORALE IN WORK ORGANIZATIONS. (U,G)

3 hours credit. No prerequisites. M T W Th F 8-9:15. Ives 214. Mr. Gruenfeld.

The focus is on variables, such as supervision, participation, the work group, job content, wages and incentives, which determine an individual's job satisfaction and job performance. Factors which influence an individual's occupational choice are also related to the meaning of work.

I. & L.R. 499. DIRECTED STUDIES. (U)

Credit to be arranged.

For individual research, conducted under the direction of a member of the faculty, in a special area of labor relations not covered by regular course offerings. Registration normally limited to upperclassmen who have demonstrated ability to undertake independent work.

I. & L.R. 510. ECONOMIC AND SOCIAL STATISTICS. (U,G)

3 hours credit. No prerequisites. Lectures, M T W Th F 9:30-10:45. Ives 212. Laboratory, two sessions each week, to be arranged. Mr. McCarthy.

A non-mathematical 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 distributions, time series (including index numbers), regression and correlation analysis, and selected topics from the area of statistical inference.

I. & L.R. 699. DIRECTED STUDIES. (G)

Credit to be arranged.

For individual research conducted under the direction of a member of the faculty.

Special Non-Credit Seminars and Workshops

In the summer of 1966 the School is again offering a series of one-week non-credit 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 includes Collective Bargaining, Job Evaluation, the Problem Employee in Industry, Management as a Communications Process, 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 Director of On-Campus Programs, Extension Division, School of Industrial and Labor Relations, Cornell University, Ithaca, New York 14850.

MATHEMATICS

Math. 111. ANALYTIC GEOMETRY AND CALCULUS. (U)

3 hours credit. Prerequisite, three years of college preparatory mathematics. M T W Th F 8-9:15. White B25.

Plane analytic geometry, differentiation and integration of algebraic functions, applications. Text: Thomas, *Calculus and Analytic Geometry*, chaps. 1-6.

Math. 112. ANALYTIC GEOMETRY AND CALCULUS. (U)

3 hours credit. Prerequisite, Mathematics 111 or the equivalent. M T W Th F 9:30-10:45. White 310.

Differentiation and integration of algebraic, trigonometric, logarithmic, and exponential functions with applications. Plane analytic geometry. Related topics, including polar coordinates, parametric equations. Text: Thomas, *Calculus and Analytic Geometry*, chaps. 6, 7, 9, 11, 12.

Math. 121. ANALYTIC GEOMETRY AND CALCULUS. (U)

3 hours credit. Prerequisite, a thorough knowledge of trigonometry and exceptional aptitude for mathematics. Students must also register for Math. 122. M T W Th F 9-10:45 and 2-3:15. White B-15.

Emphasis on the mastery and techniques needed for further preparation in the sciences, including engineering and advanced mathematics. Mathematics 121 and 122 together treat the following topics: 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 including polar coordinates, parametric equations, and vectors. Text: Agnew, *Calculus*.

Math. 122. ANALYTIC GEOMETRY AND CALCULUS. (U)

3 hours credit. Must be taken with 121. Prerequisite, current registration in 121. See description above under Math. 121.

Math. 200. BASIC CONCEPTS OF MATHEMATICS. (U)

3 hours credit. Prerequisite, Mathematics 122 or its equivalent. M T W Th F 9:30-10:45. White B-9.

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. 213. ANALYTIC GEOMETRY AND CALCULUS. (U)

3 hours credit. Prerequisite, Mathematics 112 or the equivalent. M T W Th F 11-12:15. White B-9.

Infinite series, solid analytic geometry, partial derivatives, multiple integrals. Text: Thomas, *Calculus and Analytic Geometry*, chaps. 13-18.

Math. 331. LINEAR ALGEBRA. (U,G)

4 hours credit. Prerequisite, Mathematics 200 or 213 or the equivalent. M T W Th F 11-12:15. White B-25.

Vectors, matrices, and linear transformations. Affine and Euclidean spaces. Transformation of matrices. Eigenvalues. Emphasis on applications.

MENTAL HEALTH

M.H. 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. 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

Music 101. THE ART OF MUSIC. (U,G)

3 hours credit. M T W Th F 11-12:15. Lincoln 321. Mr. Paterson.

An approach to the understanding and rational enjoyment 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 331. SAGE CHAPEL CHOIR. (U)

1 hour credit. Registration limited to members of the summer choir who are also registered for another course or courses in the Summer Session. Rehearsals Tuesday evenings 7:15-9 and Sunday morning 9:30. Sage Chapel. Mr. Sokol.

Membership in the choir is not limited to persons who register for the course.

PHYSICS

*Physics 105. TOPICS IN PRESENT-DAY PHYSICS. (U,G)

3 hours credit. (Graduate credit limited to secondary school teachers who already have baccalaureate degrees.) Prerequisites, 3 units of college-preparatory mathematics and a year-course in either college or high-school physics. Consent of instructor required. M T W Th F 10-12. One two-hour lecture per week (usually on Mondays), one two-hour discussion meeting on each of three days of the week, and one meeting a week either for additional lectures or to view and discuss pertinent instructional movies. Lectures in Rockefeller B. Movies in Rockefeller D. Messrs. Parratt and Haskin.

Typical topics are: special relativity, quantum theory, elementary particles, wave-particle duality, high-energy accelerators, radio astronomy, cosmology.

Except for the common Monday lectures and for the additional lectures or movies, students are subdivided into class-study groups according to interests, background preparation, etc. Three credit hours of Physics 105 and 3 of Physics 109 or 309 will satisfy the requirements of the College of Arts and Sciences at Cornell for the physical science sequence in Distribution I. Physics 105 is not the equivalent of Physics 101, 121, 201 or 207 of the academic year. Fee, \$5.

***Physics 109. GENERAL PHYSICS LABORATORY. (U,G)**

1 to 3 hours credit. (Graduate credit limited to secondary school teachers who already have baccalaureate degrees.) Prerequisites, 3 units of college-preparatory mathematics and a year-course in either college or high-school physics. Laboratory open M T W Th F 2-5. Rockefeller 306. Mr. Carr.

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

***Physics 309. INTERMEDIATE EXPERIMENTAL PHYSICS. (U,G)**

1 to 3 hours credit. Prerequisites, Physics 102, 109 or 208, and Mathematics 112, or consent of the instructor. Lectures and laboratory, M T W Th F 2-5, Rockefeller 354. Mr. Carver.

Topics in experimental methods and data analysis with selected experiments to suit the individual student's need. Experiments are offered in resonance phenomena, electricity and magnetism, electronics, optics, and modern physics. Fee, \$5 per credit hour.

***Physics 361. INTRODUCTORY ELECTRONICS. (U,G)**

2 hours credit. Prerequisite, Physics 309 or 310, or consent of the instructor. Lectures and laboratory, M T W Th F 2-5, Clark 309.

Principles of vacuum tubes, semiconductor devices, electronic circuits, and their operating characteristics; knowledge of methods and techniques invaluable to the student who plans experimental work in almost any field involving modern instruments. Fee, \$10.

Physics 436. MODERN PHYSICS. (U,G)

4 hours credit. Prerequisites, Physics 322 and Mathematics 222 or 331, or consent of the instructor. Lectures, M T W Th F 8-9:15 and 9:30-10:15, Rockefeller 108.

Selected topics in atomic, solid state, and nuclear physics; fundamental particles, atomic spectra, fundamentals of the quantum theory, the periodic table, X-rays, cosmic rays, properties of nuclei, and nuclear interactions. At the level of *Elementary Modern Physics* by Weidner and Sells and of *Principles of Modern Physics* by French.

ADVENTURES IN PHYSICS

June 29 to August 12. A special program is available for selected high-ability secondary-school students who have completed the eleventh grade and high-school physics. No credit. (See Other Programs, page 63.)

PSYCHOLOGY

Psych. 101. INTRODUCTION TO PSYCHOLOGY. (U)

3 hours credit. M T W Th F 8-9:15. Goldwin Smith D. Mr. Maas.

An introduction to the scientific study of behavior and experience, covering such topics as perception, learning, motivation, emotion, personality, and mental illness.

Psych. 208. INTRODUCTION TO PERSONALITY AND SOCIAL PSYCHOLOGY. (U)

4 hours credit. M T W Th F 9:30-10:45. Morrill 340. Mr. Ostrander.

Description and analysis of major consistencies in interpersonal behavior. Includes an over-all survey of principles and perspectives of the field, and a detailed analysis of several books.

Psych. 325. ABNORMAL PSYCHOLOGY. (U)

4 hours credit. M T W Th F 11-12:15. Morrill 340. Miss Donelson.

An introduction to the study of disordered behavior. Description of major syndromes, investigations and theories of etiology, and approaches to treatment will be covered in an attempt to introduce the student to major concepts and problems in this area.

Psych. 531. CONTEMPORARY PROBLEMS OF PSYCHOLOGY. (U,G)

4 hours credit. T Th 2-4:30. Morrill 340. Mr. Ostrander.

Examination of a topical area in psychology, e.g., existentialism, creativity research, from the standpoint of theory, methodology, and empirical findings.

SOCIOLOGY

Soc. 101. MAN AND SOCIETY. (U)

3 hours credit. M T W Th F 11-12:15. Goldwin Smith 128. Mr. Kaplan.

An introduction to the principal questions, perspectives, and methods of sociology. The focus will be upon the processes which maintain the continuity and stability of society and contribute to its change. Detailed analyses will be made of institutions and organizations, socialization and social control. Emphasis will be given to contemporary research in these areas.

Soc. 342. EDUCATIONAL SOCIOLOGY. (U,G)

4 hours credit. Prerequisite, Sociology 101 or consent of the instructor. M T W Th F 11-12:15. McGraw B-20. Mr. Dentler.

An examination of educational institutions in the context of contemporary culture and society, emphasizing the dynamics of school-community relationships. The study of educational institutions as social systems will also be included.

Soc. 343. THE FAMILY. (U,G)

4 hours credit. Prerequisite, Sociology 101 or consent of the instructor. M T W Th F 12:30-1:45. McGraw B-20. Mr. Streib.

The family in various cultures but particularly in American society, from the standpoint of its organization and relation to other social institutions. Emphasis is placed upon the family's major social functions (reproduction, maintenance, socialization, and the conferring of status) and upon the cyclical features of the family (courtship, marriage, parenthood, and dissolution).

Soc. 344. RELIGION IN WESTERN SOCIETY. (U,G)

4 hours credit. Prerequisite, Sociology 101 or consent of the instructor. M T W Th F 9:30-10:45. McGraw B-20. Mr. Streib.

The interrelationship of culture, society, and religion. Religion and social stratification, religion and economic and political institutions, social change and religion. The major emphasis will be upon American society and American religious institutions.

Soc. 351. SOCIOLOGY OF DEVIANCE. (U,G)

4 hours credit. Prerequisite, Sociology 101 or consent of the instructor. M T W Th F 8-9:15. McGraw B-20. Mr. Kaplan.

A sociological examination of the problem of deviance in society. Juvenile delinquency, gangs, mental illness, alcoholism, suicide, drug addiction, and

other types of social problems will be covered. A strong empirical emphasis will be given to the general problem of social disorganization and related psychological problems.

SPEECH AND DRAMA

Sp.&Dr. 190. DIRECTED STUDY IN SPEECH AND DRAMA. (U,G)

3 hours credit. Hours to be arranged. Open to undergraduates and graduates prepared for advanced studies in speech or drama and theatre. Permission of one of the instructors required for registration. Messrs. Albright, Beck, and Wilson.

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. Bakke.

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, and in chairmanship; study of examples; conferences.

Sp.&Dr. 231. SPEECH FOR THE CLASSROOM TEACHER. (U,G)

3 hours credit. M T W Th F 8-9:15. Lincoln Hall 204. Mr. Bakke.

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. 286. PLAY PRODUCTION. (U,G)

3 hours credit. M T W Th F 9:30-10:45. Lincoln Hall 301. Mr. Shank.

Principles and standard practice in play production, with emphasis on directional viewpoints and objectives. Special attention to problems of organization, play selection, casting, and producing in school and community. Opportunities to observe rehearsals and performances of the Summer Theatre company. Students matriculated for a degree at Cornell University may offer this course as the equivalent of Speech and Drama 285.

Sp.&Dr. 374. BRECHT AND THE ABSURDISTS: TWO APPROACHES TO MODERN THEATRE. (U,G)

3 hours credit. M T W Th F 11-12:15. Lincoln Hall 302. Mr. Carlson.

The theory and practice of epic and absurdist theatre; their contrasting views of man and society, and their dramatic techniques. Certain important critical works will be read, and selected plays by Brecht, Beckett, Ionesco, Genet, and Albee will be studied.

Sp.&Dr. 375. THE MOTION PICTURE: A SURVEY. (U,G)

3 hours credit. M T W Th F 9:30-10:15. Projection periods, T Th 1:30-3:30. Lincoln Hall 204. Mr. Beck.

An introduction to the history and art of the film: its characteristic problems.

devices, and development. Representative motion pictures, from *The Great Train Robbery* and Griffith's *The Birth of a Nation* or *Intolerance* to contemporary films of significance, will be studied. Students are urged to attend the film programs on the campus.

Sp.&Dr. 383. THEATRE PRACTICE. (U,G)

3 hours credit. M W F 1:30-4, and some evenings and other afternoons as required by production needs. Lincoln Hall B-9. Miss Gibson and staff.

An intensive laboratory course in acting and play production integrated with the Summer Theatre. Varied projects and special assignments in the systematic preparation of plays for public performance. This course is normally required of undergraduate and graduate students majoring in drama at Cornell University. To earn an additional three credit hours, a student may elect to take one of the following Speech and Drama course offerings: 286, Play Production; 375, The Motion Picture: A Survey; 393, Modern American Drama and Theatre; or 374, Brecht and the Absurdist.

Sp.&Dr. 393. MODERN AMERICAN DRAMA AND THEATRE. (U,G)

3 hours credit. M T W Th F 1:30-2:45. Lincoln Hall 302. Mr. Albright.

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, Miller, and Albee. Students matriculated for a degree at Cornell University may offer this course as the equivalent of Speech and Drama 392.

SUMMER THEATRE

Work in acting and in various phases of production open to those enrolled in courses in Speech and Drama and to other interested Summer Session students. Weekly public performances. Messrs. Beck, Carlson, and Shank. No credit. (If credit is desired, see Speech and Drama 383, Theatre Practice.)

ZOOLOGY

*Zool. 103u. GENERAL ZOOLOGY. (U)

3 hours credit. *June 29 to July 22.* Lectures, M T W Th F 9 and 11. Stimson G-25. Laboratory, M T W Th F 1-3:20. Stimson 102. Mr. Hurlbert and assistants.

A survey of the animal kingdom, observations and dissections of representative species, beginning with single-cell organisms up to vertebrate animals. Fee, \$10.

*Zool. 104u. GENERAL ZOOLOGY. (U)

3 hours credit. *July 25 to August 12.* Prerequisite, Zoology 103u or its equivalent. Lectures, M T W Th F 9 and 11. Stimson G-25. Laboratory, M T W Th F 1-3:20. Stimson 102. Mr. Hurlbert and assistants.

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. Fee, \$10.

OTHER PROGRAMS OF THE SUMMER SESSION

The following Special Programs are offered during the Summer Session period, June 15 to approximately September 15. Some occur during the period of the 8-week and 6-week sessions, June 20 to August 12. Note the dates scheduled for each program. Other programs may be added before the Session begins. Inquiries are invited.

The Special Programs differ from the 8-week and 6-week sessions in one or more features such as tuition rates, length of period, clientele to be served, application procedures, registration process, and otherwise. The variations are noted in the description of each program.

In certain programs it may be possible for a student registered in the 6-week session to elect a course from a Special Program as part of his schedule. Likewise it may be possible for a student admitted to a Special Program to add a 6-week session course to complete his study in the summer. In either case the Summer School tuition rate will apply for the elected course rather than the rate specified in the Special Program.

Applicants for admission to a Special Program do not use the form provided in the back of the Announcement to be used for admission to the 8-week and 6-week sessions. Directions for requesting further information and application forms accompany the following descriptions of Special Programs.

ADVANCED PLACEMENT PROGRAM FOR SECONDARY SCHOOL JUNIORS

JUNE 29 — AUGUST 12

The Advanced Placement Program for Secondary School Juniors, open only to academically talented students who have completed the eleventh year in high school in June, 1966, is offered to enable college-bound students to achieve advanced placement in college.

The program offers college-level courses in each of nine options: bacteriology, botany, chemistry, French, German, Russian, Spanish, mathematics, and zoology. In each option the student may earn a total of six hours credit to be recorded with the Registrar of Cornell University for subsequent transfer as desired. Each option requires the full time of the student for the six-week session.

Special provisions are made for housing, dining, and counseling services. The usual health services and all extracurricular activities provided in the Summer Session are made available. The total charge to each student is \$375 for all expenses except textbooks and personal expenses.

For further information and application forms, address: Director, Advanced Placement Program, Secondary School Juniors, B-20 Ives Hall, Cornell University, Ithaca, New York 14850. Request for application forms is to be made by February 20.

ADVENTURES IN PHYSICS FOR HIGH-ABILITY SECONDARY-SCHOOL STUDENTS

Supported by the National Science Foundation

JUNE 29 — AUGUST 12

This program is designed for students who will have completed their eleventh grade. The program provides a superior opportunity in physics, both class-

room and laboratory, to supplement the usual offerings in the secondary school. The specific objectives include:

1. Imparting to the student some of the exciting adventure of physical science in our present-day culture,
2. Facilitating self-evaluation of the student's personal interests in science, and
3. Providing a meaningful first exposure to the academic atmosphere of college.

Selection is limited to students in the top 10 per cent of their class who will have completed a one-year course in high school physics and three years of college-preparatory mathematics.

Students are housed in University dormitories, with counselor and health services provided. It is expected that most students will pay for their own instructional materials, subsistence, and personal expenses; however, if financial need is demonstrated, financial aid for subsistence and travel is available.

For further information and application forms, address: Professor L. G. Parratt, Director, Adventures in Physics, 109 Clark Hall, Cornell University, Ithaca, New York 14850.

AGRICULTURAL EDUCATION

JULY 11 — 29

Three-week unit courses in technical agriculture and education are being made available to teachers of agriculture and other professional workers in vocational and technical education. The three-week courses provide an opportunity for professional improvement without the need for extended leaves of absence from positions.

Graduate credit earned in three-week unit courses may be applied toward the residence requirement for only the professional degree in education at Cornell. Students desiring to become candidates for this degree should also register in the Graduate School. The courses may also be applied toward meeting certification requirements.

Registration for the three-week session will take place July 11, 1966, at a time and place to be announced.

Two one-week courses in technical agriculture are also available to teachers of agriculture (see page 66). Registration for the course will be in advance.

For further information, address Dr. J. P. Bail, 209 Stone Hall, Cornell University, Ithaca, New York 14850.

*Ag. Eng. 447u. PRINCIPLES OF AND DEVELOPMENTS IN FARMSTEAD MECHANIZATION. (U,G)

2 hours credit. Lectures, M T W Th F 10-12. Laboratory, T Th 1-4. Riley-Robb Hall 15. Mr. Price.

Application of the principles of materials handling to farmstead mechanization. Emphasis will be directed to those operations applicable to dairy and poultry farms. Field trips will be included to study farm applications which illustrate factors necessary in planning the mechanized system. Designed especially for those persons conducting educational programs with farmers and students of vocational agriculture. Fee, \$5.

*Agron. 321u. SOIL AND WATER CONSERVATION. (U,G)

2 hours credit. Lectures M T W Th F 8-9:50. Laboratory, M W 1-4. Caldwell 100. Mr. Kerr.

A beginning course in principles and methods of soil and water conservation. The agronomic aspects of soil conservation will receive primary emphasis. Laboratory sessions will concentrate on applying conservation principles to actual land situations. Fee, \$3.

R.E. 433u. SPECIAL PROBLEMS IN AGRICULTURAL EDUCATION: METHODS AND MATERIALS OF TEACHING AGRICULTURE. (U,G)

2 hours credit. Experience as a teacher of agriculture or consent of instructor required. M T W Th F 10-11:50. Warren 31. Mr. Craig.

The methods and materials of instruction in agriculture at the high school level, including techniques, sources of material, procedures, and teaching methods. Attention will also be given to organizing the course of study and planning instructional units.

R.E. 534u. EDUCATION FOR LEADERSHIP OF FARM YOUTH AND ADULT GROUPS. (U,G)

2 hours credit. M T W Th F 8-9:50. Warren 31. Mr. Cushman.

Initial emphasis will be placed on the principles which have proved effective in organizing and directing the traditional young farmer program. The second part of the course will be devoted to adapting these principles to out-of-school programs in the off-farm agricultural occupations. Consideration will be given to such concerns of teachers as making arrangements to have programs, determining instructional needs, planning programs of instruction, individual and group instruction, and evaluation of programs.

R.E. 632u. ORGANIZATION AND ADMINISTRATION OF VOCATIONAL AND TECHNICAL EDUCATION. (G)

3 hours credit. M T W Th F 9-11:50. Laboratories as arranged. Warren 132. Instructor to be appointed and visiting lecturers.

Designed for the teacher of vocational or academic subjects as well as the administrator who is seeking certification as a Director of Vocational Education. Students enrolling in R.E. 632u may not take any other course in the three-week session except R.E. 449u or R.E. 500u.

Study of administrative practices and organizational patterns for providing vocational and technical education at the high school and post-high school level, including area vocational centers. The role of advisory committees, public relations, plant equipment, staff personnel relations, teacher selection and induction, and student personnel problems are included. The relationship of the vocational director to the total school program and other school officials are stressed. Recent research studies in administration are reviewed for implications in vocational education.

R.E. 499u. INFORMAL STUDY IN EDUCATION. (U,G)

Credit and hours as arranged. Consent of instructor required. Staff.

R.E. 500u. SPECIAL STUDIES IN EDUCATION. (G)

Credit and hours as arranged. Prior approval of instructor required for registration. Staff.

Students working on theses or other research projects may register for this course.

Special One-Week Courses (Advanced Registration Only)

*Ag. Eng. 405u. ADVANCED WELDING. (U,G)

1 hour credit. *July 18 to 22.* Lecture and laboratory, M T W Th F 9-12 and 1-4. Riley-Robb Hall 60 and 64. Mr. Lechner.

Includes instruction and laboratory practice in advanced oxyacetylene, electric, and inert gas welding as applied to agricultural mechanization. Registration by permission of the instructor. Fee, \$3.

*Consv. 303u. WOODLOT MANAGEMENT AND CONSERVATION. (U,G)

1 hour credit. *August 1 to 5.* M T W Th F 8:30-4:30 and 3 evening sessions. Arnot Forest Laboratory. Mr. Dickson and Mr. McNeil. Limited to 25 students; preference is given to teachers of vocational agriculture but others will be admitted to the capacity of the class.

Designed to give the student the basic information necessary to implement sound management practices in a woodland tract. Field trips to woodlots will emphasize variations in value and potential. Actual practice in tree identification, log scaling, timber estimating, tree marking, and cutting in immature stands is given. The interrelationship of woodlot and wildlife management will be included. Fee, \$5.

AREA STUDY PROGRAMS FOR SECONDARY SCHOOL TEACHERS OF HISTORY AND THE SOCIAL SCIENCES

JUNE 29 — AUGUST 12

Combinations of courses in the social sciences have been arranged to provide area study programs dealing with China, the Soviet Union, and Southeast Asia. The purpose in each program is to enable teachers to increase their knowledge and understanding as background for modernizing the range and scope of social studies education in the secondary school.

Each area of study will require the full time of the student for the six-week period and provides six hours of graduate level credit. The instructors for each area are authorities in their respective fields.

Approved for 45 New York State summer training grants to defray cost of tuition and fees for New York State teachers of social studies in grades six through twelve.

For further information and application forms, address: Director, Area Study Programs, B-20 Ives Hall, Cornell University, Ithaca, New York 14850. Please identify the area or areas of study desired.

The courses in each program are:

China Program

History 324. HISTORY OF CHINA DURING THE NINETEENTH AND TWENTIETH CENTURIES; *and*

History 490. SEMINAR IN MODERN CHINESE HISTORY. See page 53.

Southeast Asia Program

Government 344. GOVERNMENTS AND POLITICS OF SOUTHEAST ASIA; *and*

Government 644. SEMINAR IN POLITICAL PROBLEMS OF SOUTHEAST ASIA. See page 52.

Soviet Union Program

History 463. MODERN RUSSIAN HISTORY FROM THE EARLY TWENTIETH CENTURY TO THE PRESENT; *and*

History 480. SEMINAR IN MODERN RUSSIAN HISTORY. See page 54.

CORNELL CONSERVATION WORKSHOP

AUGUST 8 — 12

Five days of lectures, demonstrations, and field trips on the facts, methods, and materials for teaching conservation. Open to teachers, administrators, youth leaders, and others interested in the wise use of natural resources. No academic credit is available, but a certificate is issued to recommend in-service training credit to the participants in the workshop.

Participants are housed in cabins in Arnot Forest, Cornell's 4000-acre conservation training center, eighteen miles from the campus. Scholarships are available for qualified persons.

For further information and application forms, address: Mr. W. T. Bell, 104 Fernow Hall, Cornell University, Ithaca, New York 14850.

DISADVANTAGED YOUTH WORKSHOP

Meeting the Needs of the Culturally Deprived Child

AUGUST 1 — 12

A two-week, intensive study of the problems presented by the educationally disadvantaged child who becomes the potential dropout, under-achiever, or reluctant learner. Instruction will include lectures, guest speakers, discussion periods, and demonstration of methods useful in meeting the needs of such children. Planned especially to serve guidance directors, classroom teachers, and school administrators.

Tuition and fee costs and per diem expenses are fundable through the Elementary and Secondary Education Act, Title I. Check with your local School District for details of application. This must be done before April 1.

Two hours of graduate level credit may be earned. For application forms and further information, address: Director, Disadvantaged Youth Workshop, B20 Ives Hall, Cornell University, Ithaca, New York, 14850.

Students will register for:

R.E. 610. SEMINAR IN GUIDANCE. (G)

2 hours credit. Lecture and discussion, M T W Th F 9-11:30 and 1-2:30. Mr. Kaplan.

EAST AND SOUTHEAST ASIAN LANGUAGE PROGRAM

JUNE 16 — AUGUST 26

The Southeast Asia Language and Area Center, in association with the East Asia Center at Cornell, and in cooperation with the Institutional Assistance Section of the United States Office of Education, offers a program of intensive language instruction in Burmese, Chinese, Indonesian, Tagalog, Thai, and Vietnamese. Sixteen courses are available during a period of ten weeks in which the student may earn twelve hours credit in Burmese, Chinese,

68 OTHER PROGRAMS

Indonesian, Thai, and Vietnamese on the introductory level and in Chinese, Indonesian, and Thai on the intermediate level.

Tuition for the program is \$45 per credit hour. Fees amount to \$5 per week or \$50 for the period. Living arrangements may be made through the Summer Session Office, B-20 Ives Hall, for use of University housing facilities. Room rates per week are \$9.50 per person for double room and \$12.50 single. There are a number of dining accommodations on the campus for students in the summer programs.

A comparable program in Southeast Asian languages is offered in alternate summers by Yale University.

For further information and application forms, address: Director, East Asia Program, 102 Franklin Hall; or Director, Southeast Asia Program, 100 Franklin Hall, Cornell University, Ithaca, New York 14850.

Burmese 101-102. INTENSIVE INTRODUCTORY BURMESE. (U,G)
12 hours credit.

Chinese 101-102. INTENSIVE INTRODUCTORY CHINESE. (U,G)
12 hours credit.

Chinese 201-202. INTENSIVE INTERMEDIATE CHINESE. (U,G)
6 hours credit.

Chinese 203-204. CHINESE COMPOSITION AND CONVERSATION. (U,G)
4 hours credit.

Chinese 102. INTENSIVE INTRODUCTORY CHINESE II. (U,G) 6 hours credit. (*June 16 to July 22.*)

Chinese 201. INTENSIVE INTERMEDIATE CHINESE I. (U,G) 3 hours credit. (*July 25 to August 26.*)

Chinese 203. CHINESE COMPOSITION AND CONVERSATION. (U,G) 2 hours credit. (*July 25 to August 26.*)

Chinese 213-312. INTRODUCTORY AND INTERMEDIATE CLASSICAL CHINESE. (U,G)
6 hours credit.

Indonesian 101-102. INTENSIVE INTRODUCTORY INDONESIAN. (U,G)
12 hours credit.

Indonesian 201-202. INTENSIVE INTERMEDIATE INDONESIAN (READING). (U,G)
6 hours credit.

Indonesian 203-204. INTENSIVE INTERMEDIATE INDONESIAN (Conversation and Composition). (U,G)
6 hours credit.

Tagalog 101-102. INTENSIVE INTRODUCTORY TAGALOG. (U,G)
12 hours credit.

Thai 101-102. INTENSIVE INTRODUCTORY THAI. (U,G)
12 hours credit.

Thai 201-202. INTENSIVE INTERMEDIATE THAI (READING). (U,G)
6 hours credit.

Thai 301-302. INTENSIVE ADVANCED THAI. (U,G)
8 hours credit.

Thai 305-306. INTENSIVE THAI LITERATURE. (U,G)
8 hours credit.

Vietnamese 101-102. INTENSIVE INTRODUCTORY VIETNAMESE, (U,G)
12 hours credit.

Vietnamese 201-202. INTENSIVE INTERMEDIATE VIETNAMESE
(READING). (U,G)
6 hours credit.

Students taking less than 12 hours credit may also take one of the following related area courses offered in the 6-week Summer Session: June 20 — August 12.

Hist. 324. MODERN CHINESE HISTORY. (U,G)
4 hours credit. Mr. O. E. Clubb. (See page 53.)

Govt. 344. GOVERNMENTS AND POLITICS OF SOUTHEAST ASIA. (U,G)
4 hours credit. Mr. Josef Silverstein (See page 52.)

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 provided that they present satisfactory evidence of being prepared and a letter of authorization from a college or university in which they are enrolled. A schedule of courses to be offered will be available after March 1, 1966.

CALENDAR. Courses are scheduled in two separate but consecutive seven-week periods: first period, June 13 — July 30, second period August 1 — September 17.

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 arranged for students admitted to the Engineering Cooperative Summer Term.

For applications address: Director of the Engineering Industrial Cooperative Program, Phillips Hall, Cornell University, Ithaca, New York 14850.

FIELD STUDIES IN NATURAL RESOURCES CONSERVATION

In Cooperation with the State Conservation
Department
JULY 11 — 29

A three-week program for teachers, supervisors, and extension workers stressing the scientific bases for natural resources management. The course is

taught at the Cornell University Biological Field Station at Oneida Lake, where facilities for lodging, meals, study space, library, and laboratory for both men and women are available. Students will live at the Station.

Emphasis is given to methods and materials for use in teaching at all grade levels and in extension classes. Instruction is by means of field experiences, lectures, demonstrations, and discussion periods. Three hours of graduate level credit may be earned.

The cost of board and room for all participants employed in New York State is subsidized by a grant from the New York State Conservation Department. The only cost to such students is \$100 to cover the tuition charge. Partial or full scholarships for tuition may be available.

For further information and application forms, address: Director, Conservation Field Course, B20 Ives Hall, Cornell University, Ithaca, New York, 14850.

Cons. 5. FIELD STUDIES IN NATURAL RESOURCES CONSERVATION. (U,G)

3 hours credit.

An intensive program of field experiences, lectures, demonstrations, and discussion periods relating to the nature, properties and interrelated character of our renewable natural resources—soil, water, forests, and wildlife. Stress is to be given the scientific bases for natural resources management and, accordingly, frequent application made of principles and concepts both from fundamental fields and the applied sciences. Attention also will be given to the governmental and legal bases for resources management, and to the citizen's role in resource policy formulation. Methods for adapting and presenting the material to the teaching situation will be included. Course requirements include supplemental readings, and satisfactory performance on quizzes and examinations.

HOME ECONOMICS UNIT PROGRAMS

JULY 5—AUGUST 12

The following programs, provided by the New York State College of Home Economics, are designed for persons who may be unable to attend the regular summer six-week session and who have particular interest in one or more of the separate departmental offerings. Participants will spend full time in each course selected.

Tuition is at the rate of \$45 per credit hour. The Summer Session fee is \$5 per week.

Registration may be for one or two units as scheduled. Early applications are requested.

For further information and application forms, address: Director, Home Economics Unit Programs, B-20 Ives Hall, Cornell University, Ithaca, New York 14850.

Administrative Dietetics

Offered by the Department of Institution Management

I.M. 545u. PERSONNEL MANAGEMENT FOR ADMINISTRATIVE DIETITIANS. (G)

2 hours credit. July 5–23. M T W Th F 8–10 and S July 23. Van Rensselaer Hall 124. Miss Proud.

Selection, placement, and training of food service employees. Developing better work methods through motion and time study. Wage and salary administration. Effect of union activities on personnel administration.

The course is for college teachers who prepare students for the field of administrative dietetics and for administrative dietitians currently employed in hospitals and in the national school lunch program. Additional time should be allowed for library work.

Food and Nutrition

Offered by the Department of Food and Nutrition

The unit courses in this program will provide opportunity to increase understanding of significant concepts in human nutrition and food science, to consider levels of knowledge suitable for different educational programs, and to meet the particular needs of class members.

F.&Ntr. 347u. CURRENT NUTRITIONAL CONCEPTS. (U,G)

3 hours credit. *July 5 through 22.* Lectures and discussion, M T W Th F 9-11:30 and hours to be arranged. Van Rensselaer 117. Mrs. Gift.

Basic principles of human nutrition will be studied with particular emphasis on recent developments. The course is designed to be appropriate for persons with different levels of nutritional knowledge: (1) professionals in the field (home economics teachers, extension or public health workers, dietitians) who wish to bring up-to-date their information in this rapidly expanding area; (2) professionals in fields other than home economics (action programs with the disadvantaged in this or other countries, social work, elementary education, health education, biology or general science teaching) whose work can be made more effective with more knowledge of human nutrition; and (3) persons interested in studying significant concepts of nutrition for general education. The class will occasionally be divided into discussion groups according to the special needs of class members.

F.&Ntr. 352u. USE OF EXPERIMENTATION IN TEACHING FOOD SCIENCE CONCEPTS. (G)

3 hours credit. *July 25 through August 12.* Prerequisite, elementary college courses in chemistry and food preparation or permission of the instructor. Lectures, discussion, and laboratory, M T W Th F 8:30-11 and hours to be arranged. Van Rensselaer 301 and 352. Miss Bartlett and Miss Personius.

Learning through experimentation is an effective method of presenting significant food science concepts and increasing understanding of the scientific principles on which these concepts and related generalizations are based. This unit is designed to present demonstrations and experiments, and to provide experience in their development, to illustrate this teaching approach. Several important concepts concerning food will be studied and appropriate experiments demonstrated or conducted in laboratory sessions. Individually, or in groups, participants will have opportunity to develop experiments; these may be in any area of food science and designed for the type of educational programs in which class members have special interest.

The course will serve the needs of home economics teachers, extension workers, and others responsible for formal or informal education programs related to food.

Home Economics Education

Offered by the Department of Home Economics Education

Three unit courses will provide opportunity for home economics teachers, extension agents, and others concerned with the teaching of home economics to engage in concentrated study for a brief period of time. One of the courses, H.E.Ed. 535u, is sponsored jointly by the Departments of Home Economics Education and Household Economics and Management.

H.E.Ed. 433u. TEACHING HOME ECONOMICS AT THE SECONDARY SCHOOL LEVEL. (G)

3 hrs. credit. *July 5-23. M T W Th F 9:30-12:15.*

Van Rensselaer East Wing 5. Miss Snell.

Planned for home economics teachers interested in studying recent innovations in the teaching of home economics. Attention will be focused on concepts and generalizations as elements of structure in program development. Group and individual work will provide experience in developing plans for teaching toward breadth and depth of understanding and in choosing learning experiences suited to the unit goals and to the background and ability of the learners.

H.E.Ed. 533u. TEACHING HOME ECONOMICS TO DISADVANTAGED YOUTH. (G)

3 hrs. credit. *July 25 - August 12. M T W Th F 9:30-10:45, and 1:30-2:45.*

Van Rensselaer East Wing 5. Miss Cooper and Mr. Feldman.

An intensive study of the problems of disadvantaged youth and the role of the home economics teacher in working with this group. Attention will be given to the social and psychological bases of learning and choice of appropriate teaching procedures. Course work will include presentation by experienced consultants, discussion, study of resource materials, and the development of individual projects.

H.E.Ed. 535u. TEACHING MANAGEMENT OF WORK IN THE HOME. (G)

3 hrs. credit. *July 25 - August 12th. M T W Th F 11-12:15 and 1:30-2:45.*

Van Rensselaer G20. Miss Rhodes and Miss Walker.

This intensive course is offered cooperatively by the Departments of Home Economics Education and Household Economics and Management and is planned for home economics teachers and extension agents.

Teaching the concepts of decision making and organization through the subject matter of work in the 1966 American home. Knowledge of work patterns, benefits, and costs needed for teaching young people to make decisions about the use of their potential and available resources and to effectively implement these decisions. Emphasis will be placed on recent research that has implications for teachers of home economics in programs designed to help young people manage effectively at home or in home-oriented occupations.

Discussion of teaching will focus on the use of concepts and generalizations as elements of structure, and the selection of appropriate teaching methods and resources when generalization is considered a primary goal of education. Group and individual work will provide opportunity to develop plans and materials for teaching.

Textiles and Clothing

Offered by the Department of Textiles and Clothing

The following courses are designed for teachers of textiles and clothing in high schools, colleges, and extension, and for degree candidates who wish to earn undergraduate or graduate credit.

Students may register for either course or for both.

T.&Clo. 390u. SOCIO-ECONOMIC ASPECTS OF CLOTHING. (U,G)

3 hours credit. *July 5-23*. Prerequisites, a college course in economics and in sociology. Lecture-discussion, M T W Th F 9:30-12:30 and hours to be arranged. 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. 215u. APPAREL DESIGN: FLAT PATTERN DESIGNING. (U,G)

3 hours credit. *July 25 - August 12*. Prerequisites, a college course in clothing construction, in textiles, and in basic design. Registration limited to 16 students. Lecture and laboratory, M T W Th F 9-11 and 1-3, plus independent studio work. Van Rensselaer 215. Mrs. Adam.

Principles of flat pattern designing as they relate to the use of fabric on a three-dimensional form. Application of the principles of flat pattern designing to the development of design ideas for apparel, and to the sizing and alteration of ready-to-wear clothing. Students will develop and use a master pattern in executing design ideas. Materials to be provided by students at an estimated cost of \$15-\$25.

HOTEL ADMINISTRATION

JUNE 20 — AUGUST 6

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, New York 14850.

MARINE BIOLOGY FIELD COURSE

JUNE 11 — 25

This program, offered by Cornell's Division of Biological Sciences, is operated through facilities of the Star Island Corporation, on Star Island, one of the Isles of Shoals located in the open Atlantic, ten miles east of Portsmouth, New Hampshire. These small, granite islands surrounded by unpolluted

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ocean water provide a uniquely rich and totally accessible flora and fauna. A large laboratory room is provided with tanks, aquaria, sea table, and running seawater. Unusual fish are available from the nets of commercial fishermen putting in at the Islands overnight. A field trip will be made by boat to marsh, beach, and other coastal habitats. Several uninhabited islands provide opportunity to study large populations of marine birds at close hand.

Enrollment in this program is limited to 30 persons. Expenses will total \$195, which covers tuition, fees, board, room, health insurance, and boat transportation for the two-week period and is payable in advance. A limited number of scholarships is available to undergraduate and graduate students. For further information and application forms, address: Director, Summer Program in Marine Biology, B-20 Ives Hall, Cornell University, Ithaca, New York 14850.

*Biol. 374u. FIELD MARINE BIOLOGY. (U,G)

2 hours credit. Prerequisite, a full year of college biology, *June 11 to 25*. Daily lectures, laboratory, and field work. Mr. Anderson (invertebrate zoology), Mr. Barlow (plankton, marine ecology), Mr. Gilbert (elasmobranchs and marine mammals), Mr. Hewitt (marine birds), Mr. Raney (marine fish), Mr. Kingsbury (marine algae), in charge.

Living material and habitats will be emphasized in introducing students to the major disciplines of marine biology and in rounding out the student's knowledge of these topics as presented at inland locations.

N. Y. STATE REGIONAL SCIENCE INSTITUTE IN BIOLOGY

JULY 11 — AUGUST 6

A four-week institute for the preparation of regional science instructors of elementary school teachers. New York State teachers with good backgrounds in the biological sciences and with at least three years' teaching experience may apply. Accepted applicants must have secured written intent of local school districts to set up and support financially a class of elementary school teachers in the local district for instruction in the biological sciences. The summer institute, supported by a grant from the State of New York Education Department, will prepare outlines and materials for such instruction. In the academic year following, each regional science instructor will be compensated via the grant and his school district for the teaching of an in-service class of elementary school teachers as arranged.

For specific information and application forms, write: Dr. Verne N. Rockcastle, Regional Science Institute, 5 Stone Hall, Cornell University, Ithaca, New York 14850.

SHELL MERIT FELLOWSHIP PROGRAM

JUNE 30 — AUGUST 12

For teachers of biology, earth science, 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, New York 14850.

Chem. 99. PROBLEMS IN CHEMICAL EDUCATION. (U,G)

3 or 4 hours credit. Registration restricted to Shell Merit Fellowship holders.

Lectures, M W F 10-11:50 and T Th 8-9:45. Laboratory, one afternoon 2-4:30 for those who elect 4 hours credit.

Ed. 606. SEMINAR IN SCIENCE AND MATHEMATICS TEACHING. (U,G)
2 or 3 hours credit. Registration restricted to Shell Merit Fellowship holders. Lectures, M W F 8-9:30 and T Th 10:15-11:50. Laboratory, T 2-4:30 for those who elect 3 hours credit in Education. Field trips, Th afternoons. Messrs. Johnson, Bruce and Winslow.

Math. 223. BASIC CONCEPTS OF SECONDARY SCHOOL MATHEMATICS. (U,G)

3 or 4 hours credit. Registration restricted to Shell Merit Fellowship holders. Lectures, M W F 10-11:50 and T Th 8-9:45. Laboratory, or discussion one afternoon 2-4:30 for those who elect 4 hours credit.

Phys. 105. TOPICS IN PRESENT-DAY PHYSICS. (U,G)

3 hours credit. Lecture, M 10-12; recitation, discussion, films W F 10-12 and T Th 8-9:45.

Phys. 109. GENERAL PHYSICS LABORATORY. (U,G)

1 hour credit. Laboratory, one afternoon 2-5 for those who elect 4 hours in Physics.

SIX-YEAR Ph.D. PROGRAM

JUNE 29 — AUGUST 13

Limited to students who will join the class of 1969 in a special program leading to doctoral study, this preliminary summer session is designed to introduce students to some of the major areas of college study, to give experience of small seminars, and to develop reading knowledge of essential languages. Each seminar is limited to 15 students.

SEMINAR IN ANTHROPOLOGY. 4 hours credit. Afternoon, hours to be arranged. Assistant Professor Arthur Wolf.

SEMINAR IN COMPARATIVE LITERATURE. 4 hours credit. Afternoon, hours to be arranged. Associate Professor Edgar Rosenberg.

SEMINAR IN MATHEMATICS. 4 hours credit. Afternoon, hours to be arranged. Professor Wolfgang Rindler.

ELEMENTARY FRENCH. 4 hours credit. Mornings, hours to be arranged.

ADVANCED FRENCH. 4 hours credit. Mornings, hours to be arranged.

ELEMENTARY GERMAN. 4 hours credit. Mornings, hours to be arranged.

ADVANCED GERMAN. 4 hours credit. Mornings, hours to be arranged.

ELEMENTARY RUSSIAN. 4 hours credit. Mornings, hours to be arranged.

ADVANCED RUSSIAN. 4 hours credit. Mornings, hours to be arranged.

AMERICAN GOVERNMENT INSTITUTE

JUNE 29 – AUGUST 12

Designed for teachers of the Social Studies grades 6 through 12. Emphasis is on analysis of policy-making processes in the areas of national security and of economic growth and development.

The purpose is to stimulate development of more dynamic and flexible perspectives on American politics. The primary focus of the Institute will be on variations in patterns of institutional dominance from one policy arena to another and from various time periods to the present.

Approved for 20 New York State summer training grants to qualified New York teachers of social studies in grades 6 through 12. Such grants pay all tuition and fee costs plus \$50 weekly subsistence allowance.

For further information and application forms, address: Director, American Government Institute, B20 Ives Hall, Cornell University, Ithaca, New York 14850.

Eight hours of graduate level credit may be earned as follows:

Gov. 329. ADVANCED ANALYSIS OF AMERICAN POLICY-MAKING PROCESSES I. (See page 52.)

Gov. 330. ADVANCED ANALYSIS OF AMERICAN POLICY-MAKING PROCESSES II. (A continuation of I above.)

AMERICAN HISTORY INSTITUTE

JUNE 29 – AUGUST 12

This Institute for teachers of history, grades seven through twelve, proposes to bring about better understanding and appreciation of how early American history has shaped development of our social institutions. It consists of a course in American history, a series of lectures on the fine arts of the early period, and a seminar aimed at improving instruction regarding the early cultural, intellectual, and aesthetic development of our country.

The program is aimed at preparing teachers for the new Social Studies Curriculum in New York.

Approved for 20 New York State summer training grants to qualified New York teachers of American history. Such grants pay all tuition and fee costs plus a \$50 weekly subsistence allowance.

For further information and application forms, address: Director, American History Institute, B20 Ives Hall, Cornell University, Ithaca, New York 14850.

Six hours of graduate-level credit may be earned as follows:

Hist. 376. AMERICAN CULTURAL AND INTELLECTUAL HISTORY. (See page 53.)

Ed. 461. SEMINAR IN SOCIAL STUDIES. (G)

2 hours credit. Open only to those enrolled in the Institute. Time and place to be arranged. Mrs. Davis.

Aimed toward improving teaching strategies in American history. The inductive approach, methods of historical inquiry, modern instructional materials and media, conceptual teaching, and tested techniques for working with various sized groups will be emphasized.

FACULTY

- James A. Perkins, A.B., Ph.D., President of the University.
Robert L. Sproull, Ph.D., Vice President for Academic Affairs.
William A. Smith, Ph.D., Director of the Division of Summer Session and Extramural Courses.
W. Donald Cooke, Ph.D., Dean of the Graduate School.
Frederick H. Stutz, Ph.D., Dean of the School of Education.
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Norman D. Daly, M.A., Professor of Art.
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Bertha Davis, M.A., Professor of Education, New York University, and Supervisor of Social Studies, New York City Public Schools.
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George Michael Enteen, Ph.D., Professor of History, Pennsylvania State University, State College.
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Leopold W. Gruenfeld, Ph.D., Assistant Professor of Industrial and Labor Relations.
Hugh Hall, Ph.D., Associate Professor of Government, Duke University, Durham, North Carolina.
Paul L. Hartman, Ph.D., Professor of Physics.

Klaus Heberle, Ph.D., Associate Professor of Government, Oklahoma State University, Stillwater.

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Donald Paterson, M. Mus., Instructor in Music.

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

Morris Perlman, Ph.D., Visiting Assistant Professor of Economics.

Joseph Puryear, Ph.D., Assistant Professor of Linguistics.

Ramamurti Rajaraman, Ph.D., Assistant Professor of Physics, University of Southern California, Los Angeles.

Cara E. Richards, Ph.D., Assistant Professor of Anthropology, Ithaca College, Ithaca, New York.

Gerald R. Rising, Ph.D., Mathematics Director, Minnemath Center, University of Minnesota, Minneapolis.

Verne N. Rockcastle, Ph.D., Professor of Rural Education.

Richard C. Shank, M.F.A., Visiting Assistant Professor of Speech and Drama.

Josef Silverstein, Ph.D., Associate Professor of Government, Rutgers State University, New Brunswick, New Jersey.

John Skawski, Ed.D., Superintendent of Schools, Peekskill, New York.

Thomas Sokol, M.A., Associate Professor of Music.

Fred Somkin, M.A., Assistant Professor of History, Queens University, Kingston, Ontario.

Thomas Sowell, M.A., Assistant Professor of Economics.

Edward W. Spofford, Ph.D., Assistant Professor of Classics.

Evelyn E. Stout, Ed.D., Professor of Textiles & Clothing.

Gordon F. Streib, Ph.D., Professor of Sociology.

Frederick O. Waage, Ph.D., Professor of History of Art.

Marvin Waldman, Ph.D., Associate Professor of Mental Health.

John W. Wells, Ph.D., Professor of Geology.

John F. Wilson, Ph.D., Associate Professor of Speech and Drama.

Elliott Zupnick, Ph.D., Professor of Economics, City University, New York City.

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CORNELL UNIVERSITY ANNOUNCEMENTS

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

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

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

The Graduate School, Graduate School of Business and Public Administration, Law School, Medical College, Cornell University-New York Hospital School of Nursing, Graduate School of Nutrition, New York State Veterinary College.

Requests for the publications listed above may be addressed to

CORNELL UNIVERSITY ANNOUNCEMENTS
Edmund Ezra Day Hall, Ithaca, New York 14850
(The writer should include his zip code.)

FOR UNDERGRADUATE STUDENTS ONLY CORNELL UNIVERSITY SUMMER SESSION, 1966

APPLICATION FOR ADMISSION AND COURSE PROGRAM

Applying for (check one)

8-week session ☐

6-week session ☐

Application due

by June 10

by June 20

Mr.

Name Miss

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

Present

Mailing Address

(Street and No.)

(City)

(State)

Home

Address

(Street and No.)

(City)

(State)

State country of citizenship (if other than U.S.)

Name of your college and/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.

PRE-ADMISSION TO COURSES

Students who can devote full time to study are expected to enroll for four or more hours in the 8-week session or three or more hours in the 6-week session. Programs of more than nine or seven credit hours respectively must be approved by the Summer Session Director. (See also reverse side of this form.)

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

Dept. Course
Abbrev. No.

Course Title

Credit Meeting
Hours Time

Leave the following spaces blank.

Received	Recorded	Sent

NOTE CAREFULLY

Undergraduate applicants are urged to consult an appropriate official in the college either to which they have been admitted or where they are 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 Session 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 Session, 1966*.

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 00 of the *Announcement of the Summer School*).

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 Director, Summer Session, B-20 Ives Hall, Cornell University, Ithaca, New York 14850.
DUE: June 10 for the 8-week session; June 20 for the 6-week session.

Applying for (check one): ☐ 8-week session. ☐ 6-week session.

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

Address
(Street and No.)

.....

(City) (State)

State country of citizenship (if other than U. S.)

The courses listed below must be chosen from the *Announcement of the Summer Session, 1966*. List courses carefully, indicating departmental abbreviation, 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, but it is possible to change courses on registration day.

Please list *entire* program.

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

.....

.....

.....

Mail this application to the Director of the Summer Session, B-20 Ives Hall, Cornell University, Ithaca, New York, by June 15 to assure place in the classes.

Leave the following spaces blank.

Received	Recorded	Sent

ACADEMIC BACKGROUND: Check the appropriate item to indicate your *highest level of academic preparation*.

☐ High School Graduate Year Graduated

☐ Undergraduate—institution attended and degree if granted:

.....
(Institution) (Location)

.....
(Dates of Attendance) (Degree)

☐ Now a candidate for a graduate degree at—

.....
(Institution) (Location)

Degree sought: Year:

☐ Holder of advanced degree from—

.....
(Institution) (Location)

Degree held: Year:

Note: Admission to the Summer Session does not constitute admission to the Graduate School. See page 13.

IF EMPLOYED IN AN EDUCATIONAL INSTITUTION, complete below—

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)

IF EMPLOYED IN OTHER PROFESSIONAL, SCIENTIFIC, OR BUSINESS POSITION, complete below—

.....
(Firm or Institution)

.....
(Location)

.....
(Title or position)