



Cornell  
University  
ANNOUNCEMENTS

*Summer Session*

1968

## 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

Volume 59. Number 17. March 18, 1968. Published twenty-four times a year: twice in March, April, May, June, July, September, and November; four times in August and October; and once in January and December. Published by Cornell University at Sheldon Court, 420 College Avenue, Ithaca, New York 14850. Second-class postage paid at Ithaca, New York 14850.

Cornell University

*Summer Session*

1968

- Eight-Week Session, June 17–August 9
- Six-Week Session, June 26–August 9
- Other Programs in the Summer Session

# Calendar of the Summer Session

## *June 17, Monday*

Registration for the eight-week Summer Session: in Room 117, Ives Hall, any time between the hours of 8 A.M. and 4:30 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 19, Wednesday*

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

## *June 21, Friday*

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

## *June 26, Wednesday*

Registration for the six-week Summer Session: in Lynah Hall; undergraduates, 8:30 to 11 A.M.; graduates and special students, 1 P.M. to 3:30 P.M. 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 27, Thursday*

Instruction in the six-week session begins at the time and place announced for each course. Late registrants report to the Summer Session Office, B-20 Ives Hall, to complete registration.

## *June 28, Friday*

Last day for making changes in registration in the eight-week session *without payment of a 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 six-week session without payment of a fraction of tuition and fees.*

## *July 2, Tuesday*

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

## *July 4, Thursday*

Holiday

## *July 5, Friday*

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

*July 12, Friday*

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

*July 17, Wednesday*

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

*July 22, 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 8, Thursday*

Final examinations begin: schedule on page 27.

*August 9, 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. YOU WILL BE HELD RESPONSIBLE FOR BEING FAMILIAR WITH ALL ITEMS OF INFORMATION AND REGULATION IN THIS *ANNOUNCEMENT* WHICH APPLY TO YOUR PARTICIPATION IN THE SESSION.

APPLICATION FORMS  
INSIDE BACK COVER

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

# Cornell University

## 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 for study.

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 twelve to fifteen 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 a variety of 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 for serious educational 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 to any other college or university. No other high school students will be accepted except in certain other programs of the Summer Session described on pages 60-75.

Undergraduates are required to register for no less than four credit hours if in the eight-week session and three credit hours if accepted for the six-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 nine credit hours in the eight-week session or seven credit hours in the six-week session will be permitted only to students with high academic averages or upon recommendation of their advisers and the approval of the Director of Summer Session.

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 9.)

Undergraduates are expected to apply for admission by June 7 if for the eight-week session, or by June 17 if for the six-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 eight-week or six-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 is included 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 eight-week session, register for as many as ten hours of credit upon recommendation of his Special Committee chairman. In the six-week session the maximum is eight credit hours.

Degree candidates may seek residence credit toward degrees in the amount of one-half of a unit for a program of eight or more credit hours in the eight-week session, or in the amount of two-fifths of a unit for a program of six or more credit hours in the six-week session. Request for residence credit is made to the Graduate School and must be supported by the student's Special Committee. (See page 14 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 eight-week or six-week sessions to take courses for vocational or personal purposes. Courses may be elected at either the graduate or undergraduate level depending on the student's background. Maximum course load is the same as for graduate students. Such a person is to apply for admission by completing the "special student" application form included 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 eight-week or six-week sessions as "special students." College students who have been suspended or dropped from their college or university are not eligible for admission as "special students" until at least one year after the date of their suspension or separation.

## APPLICATION FOR ADMISSION

Admission to the eight-week or six-week sessions is gained through formal application. The forms are included 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 eight-week or six-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. Each program has a separate application form which must be used. (See descriptions of Other Programs, pages 60 to 75.)

## Academic Credit

Courses offered in the eight-week and six-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 credit only at the undergraduate level. 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 committee 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. Registration will be cancelled for persons who do not participate fully. 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, Professor A. H. Detweiler, or Professor John P. Shaw

College of Arts and Sciences: Associate Dean A. J. Cheney

College of Engineering:

Basic Studies: Professor H. G. Smith

Chemical: Professor C. C. Winding

Civil: Professor William McGuire

College Program: Professor William H. Erickson

Electrical: Professor J. L. Rosson

Industrial: Professor B. W. Saunders

Materials Science and Engineering: Professor W. S. Owen

Mechanical: Professor G. R. Hanselman

Engineering Physics: Professor T. R. Cuykendall

College of Home Economics: Mrs. Joyce McAllister

School of Hotel Administration: Dean R. A. Beck

School of Industrial and Labor Relations: Assistant Dean D. P. Dietrich

Division of Unclassified Students: Professor M. W. Sampson

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, 1969.* 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.

## 10 REGISTRATION

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.

Students may hand in self-addressed postcards with their final examination papers to receive the final marks in their courses, or they may leave a stamped, self-addressed envelope with the Registrar, 240 Day Hall, for this purpose. *Final marks will not be available at the Summer Session Office.*

**TRANSCRIPTS.** Grades of 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 no transcript is available for "noncredit" courses.

## Registration

### EIGHT-WEEK SESSION

All students in the eight-week session will register on Monday, June 17. All classes scheduled for the eight weeks will start on this date. Students are to complete their registration at any time during the day between the hours of 8 a.m. and 4:30 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 preadmitted applicant, to Room 117 Ives Hall for completion and approval. Directions for processing the registration forms will be given at that time.

Students in the eight-week session may elect a course from the program in the six-week session provided the time schedule of classes does not conflict. Students taking courses in both sessions will register their entire program on Monday, June 17.

### SIX-WEEK SESSION

Students in the six-week session will register on Wednesday, June 26, in Lynah Hall. Only undergraduates register in the forenoon. Graduate and special students register in the afternoon. The certificate of admission, sent to each preadmitted student for the six-week session, will state the hour of the day when he will be admitted to Lynah 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 six-week session who register for *only* a unit course scheduled to start July 22 will do so on the date of the first class meet-

ing of the course. Unless otherwise specified, the place of registration will be the Summer Session Office, B-20 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 eight-week or six-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 60 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, B-20 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. on July 12 for students in the eight-week session and after 4 P.M. on July 17 for those in the six-week session. When a change in registration involves enrollment in another course, or change in credit status, the permission of the instructor of the course is necessary before the change will be made.

A student enrolled in the eight-week session, who desires to change courses to those in the six-week session only, must come to the Summer Session Office after the regular six-week session registration day (June 26) and initiate a change of registration.

Penalty fees for changes in registration are described under Fees and Deposits, page 12.

## 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 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 percent 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 19, in the eight-week session and by Friday June 28, in the six-week session.

Approval of withdrawal requires the surrender of the student's Official Registration Certificate and all privileges it provides as of the date granted.

## Tuition and Fees

Tuition and fees are due and payable at the Treasurer's Office in Day Hall on registration day. For the eight-week session the date is June 17. For the six-week session the date is June 26.

The last day for payment without penalty is Friday, June 21, in the eight-week session and Tuesday, July 2, in the six-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

Tuition is charged according to the number of credit hours for which the student is registered. The rate of tuition is \$50 per credit hour. Students in the eight-week or six-week sessions, permitted to elect one or more courses from a Special Program of the Summer Session (see pages 60 to 75), will be charged at the \$50 rate per credit hour.

### FEES

All students in the eight-week and six-week sessions will pay, in addition to tuition, a general fee of \$5 per week, which entitles them to medical and hospital services (see pages 18 and 19), 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 Director of Summer Session has been obtained for the delay.

A student who has approval to make a change in program (see definition, page 11) after 4 P.M. on June 28 in the eight-week session, or July 5 in the six-week session, must pay a \$10 change of registration fee. No change in program will be permitted after 4 P.M. on July 12 for students in the eight-week session, and after 4 P.M. on July 17 for those in the six-week session, except for reasons beyond the control of the student.

**GRADUATE REGISTRATION FEE.** A fee 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 fee is used to pay the matriculation costs and covers certain expenses incidental to graduation if the student receives a degree. The fee is not refundable.

For other information concerning Graduate School regulations, see pages 13, 14 and 15.

## Other Regulations Concerning Payments

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 re-statement 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.*

**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 therefore are 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.

## 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.

## 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 with 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 credit 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 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, the completion of eight or more hours of credit in the eight-week session, or a minimum of six hours in the six-week session, will count as one-half or two-fifths of a residence unit respectively, if approved in advance and reported as acceptable by the Special Committee.

Requirements for Masters' degrees may, upon approval of the appropriate graduate 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. If you also want *Announcement of the Graduate School* please state your field of major concentration. Be sure to include your complete address with zip code number. Applications received prior to May 1 will be acted upon in time for the accepted candidates 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 FEE.** 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 12.)

## REGISTRATION

*Only students approved for admission in the Graduate School must register with both the Summer Session and the Graduate School.* Full information 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 FIELD OF EDUCATION

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

# Housing and Dining

## HOUSING

Rooms are available in University-operated housing units for all students registered in the six-week and eight-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 linens, (laundered by the University), blankets, and bedspread. Bed linens are replaced weekly. Daily room care, including bedmaking, is the responsibility of the occupant. The occupants also furnish their own towels and soap.

Students registered in any program of the Summer Session, who withdraw before the program is completed must terminate their occupancy of University-operated housing facilities.

## Undergraduate Women

All undergraduate women and women under twenty-one who are registered as special students are required to live and take their meals in a University residence hall. There will be a uniform charge of \$224.25 for board and room for the six-week Summer Session and \$268.25 for the eight-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 six-week Summer Session are \$69 for single and \$51 per person for double accommodations. For the eight-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 six-week Summer Session are \$69 for single and \$51 per person for double accommodations. For the eight-week 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 20). There are no prescribed closing hours for men's dormitories.

## Opening and Closing Dates

Living units to be used during the six-week Summer Session will open for occupancy on Tuesday, June 25; they will close at 2 P.M., Saturday, August 10. Living units to be used during the eight-week Summer Session will be open on Sunday, June 16 and close at 2 P.M., Saturday August 10. *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 six-week or eight-week Summer Session 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 applied towards the residence charge.*

Room deposits which accompany room application 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 University has the policy of requiring all students to live in housing which is approved by the University Student Housing Agency.

To assist students, both married and single, to secure adequate housing, the University Student Housing Agency provides an inspection and information service. Information on properties which have University approval and approved housing *currently available* is posted for their convenience in the Off-Campus Housing Office in Day Hall, Room 223. As changes of currently available apartments occur daily, it is not practical to prepare lists.

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-WEEK 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.

## AFTER CLINIC HOURS

On a limited basis, with a nurse in attendance, the Gannett Medical Clinic will also be open 4:30 P.M. to 6 P.M. weekdays and 12 noon to 6 P.M. Saturdays 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 6 P.M. on a weekday or after 11 A.M. on a Sunday, students should call 272-6962 or 275-5211 for instruction. Extended hours are in effect for the eight-week Summer Session.

## EMERGENCY SERVICE

A doctor is always available for calls of an emergency nature when an accident has occurred or when the student is too ill to come to the clinic or the hospital. (In the women's dormitories these calls should be made by the Head Resident whenever possible.) Telephone calls for this service should be made through the Gannett Medical Clinic, Ithaca 275-3493, when the clinic is open (see hours above); to 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 such 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 3,000,000 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, Uris, Mann, Physical Sciences, Law, Business and Public Administration, 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 five days 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 and 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. on Saturday. Parking restrictions are in effect twelve months of the year.

Each student registered for any program in the Summer Session is required to complete the Safety Division IBM card 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.

## The Weekly Bulletin and Calendar

The Summer Session *Weekly Bulletin*, issued and posted on each Saturday of the six-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, in Noyes Lodge, at the Dairy Bar, and in the main offices of the dormitories. 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 four Thursday evening concerts. The dates are July 11, 18, 25, and August 1. All Thursday concerts begin at 8:15 P.M. in Alice Statler Auditorium. Performing artists will be announced.



In addition to the Thursday evening concerts, an organ recital will be given in Bailey Hall by Professor Donald R. M. Paterson, University Organist, on Sunday, July 21.

## RELIGIOUS SERVICES

### Sage Chapel

Nondenominational services (ecumenical insofar as possible) are held in Sage Chapel throughout the academic year. Since 1875 Sage Chapel has been the center of worship for the Cornell community. In that year an endowment fund was established by the Dean Sage family for the purpose of bringing religious leaders and speakers to the Chapel. This fund was later augmented by the Thorp family. Outstanding clergymen and laymen—Protestant, Catholic, Jewish, and those from other religious traditions—preach in Sage Chapel during the academic year. Also, directors and chaplains of Cornell United Religious Work lead the services each week and preach from time to time throughout the year. During the Summer Session period a similar series is provided in the Chapel at 11 A.M. on the six Sundays, June 30—August 4 inclusive. Information about other religious services on campus and in Ithaca may be obtained in Anabel Taylor Hall Information Office, Room 118, or by calling Extension 4214.

### Cornell United Religious Work

CURW serves as a nonacademic division of religious affairs in the University, with offices in Anabel Taylor Hall. The united program was founded in 1869 and took its present name in 1929 as an interfaith organization. University chaplains, representing major religious faiths, provide leadership, counseling, and opportunities for worship, study, and service in the various traditions. In addition, they work closely with the CURW Directors and Board in developing an extensive and flexible program of interfaith projects, conferences, lectures and noncredit courses which are open to all without regard to religious affiliation.

### 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 (Professor Donald R. M. Paterson). The Choir rehearses in Sage Chapel on Tuesdays at 7:15 P.M., and on Sunday mornings at 9:30. The first rehearsal will be held on Sunday, June 30. 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 a series of productions. Among performances during the past two summers have been such plays as Ann Jellicoe's *The Knack*, Brendan Behan's *The Hostage*, Ugo Betti's *The Gambler*, Eugene Ionesco's *The Bald Soprano*, Bertolt Brecht's *St. Joan of the Stockyards*, Atholl Fugard's *The Blood Knot*, William Saroyan's *The Cave Dwellers*, Felicien Marceau's *The Egg*, Friedrich Duerrenmatt's *The Deadly Game*, and Shelagh Delaney's *A Taste of Honey*.

The Summer Theatre program is coordinated with the course offerings in the Department of Theatre Arts (see page 59). Undergraduate and graduate credit is available to qualified students in such Theatre Arts courses as 286, Play Production; 377, Fundamentals of Motion Picture Production; and 374, Brecht and the Absurdist: Two Approaches to Modern Theatre.

Details of participation in the Summer Theatre program—for academic credit, or on an extracurricular basis—may be obtained from Professor Marvin Carlson, Summer Theatre, 106 Lincoln Hall, Cornell University, Ithaca, New York 14850.

## ART EXHIBITS

### Museum of Art

#### ANDREW DICKSON WHITE MUSEUM

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

During the summer of 1968, special exhibitions will include "The Articulate Subconscious" (artists whose work is based on the personal need to present their view of the world around them rather than upon current international styles); "American Still-Life Painting: 1913-1967"; "George Grosz" (watercolors and drawings); and Lyonel Feininger: "The Ruin by the Sea." There will also be on view selections from the Museum's Asian, contemporary, and graphic arts collection.

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

### 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 noon to 5 P.M.

## SPORTS

Softball diamonds on Upper Alumni Field, tennis courts conveniently situated around the campus, and the eighteen-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 six-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 5 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 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. a woman student may be accompanied by a male guest.

### Intramural Softball League

Groups or individuals who wish to participate in softball competition should see Mr. Peter Carhart, 275-4065 or 273-3184.

### 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. Peter Carhart at Beebe Lake, or call 275-4065 or 273-3184.

## SUMMER-ITHACA

A "Calendar" of varied events of interest to residents and visitors is published and distributed free of charge 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 12 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 descriptions. Courses in the eight-week session normally meet for fifty minutes daily. Courses in the six-week session carrying two credit hours also meet for fifty minutes daily. Other courses in the six-week session meet for seventy-five minutes daily.

MEETING PLACES of courses are named in the course descriptions. Any additions or 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, final examinations in courses in the eight-week and six-week sessions will be held on Thursday, August 8, and Friday, August 9, 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 scheduled 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 A.M. classes, Thursday at 8.

9 and 9:30 A.M. classes, Friday at 8.

10 A.M. classes, Thursday at 10:30.

11 and 11:30 A.M. classes, Thursday at 2.

12, 12:30, and 1 P.M. classes, Friday at 10:30.

1:40 and 2 P.M. classes, Friday at 2.

**EXCEPTIONS:** For all unit courses in either half of the eight- or six-week sessions, the final examinations will be on Friday.

## EIGHT-WEEK SESSION

June 17–August 9

*Any student in the eight-week session may elect a course from the program of courses for the six-week session if the time schedule of classes will permit. Students taking courses in both sessions will register for their entire program on Monday, June 17.*

Registration for this session is to be completed Monday, June 17, between the hours of 8 A.M. and 4:30 P.M. Each student must report to Room 117, 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 Room 117, Ives Hall to complete registration.

For other general information, see pages 5 to 27.

## ENGINEERING

### Electrical Engineering

Eng. 242. ELECTRICAL SCIENCE II (U)

Three hours credit. Prerequisite, Eng. 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. Mr. Gazourian.

An introduction to modern electrical engineering. Simple models are developed for a wide variety of electrical devices, and interactions between several devices are considered. Analytical and graphical techniques for calculating responses to various excitations of simple electrical systems containing these devices are included. Indicative of the types of systems considered are: networks of linear resistances and capacitances subjected to steady and sinusoidal excitations; circuits of triode and transistor amplifiers; inductive systems, both linear and nonlinear, such as transformers and elementary electromechanical transducers; and simple distributed systems such as transmission line and resonators. Throughout the course, emphasis is placed upon the physical principles underlying system behavior.

### Engineering Cooperative Program

(See Other Programs, pages 67–68.)

### Engineering Short Courses

(See Other Programs, pages 68–69.)

## Materials Science and Engineering

Eng. 6211. MATERIALS SCIENCE (U)

Three hours credit. Prerequisite, 6210 or the equivalent. Lectures, M T W Th F 9. Bard 140. Laboratory W 2-4:30 and M 7:30-10 P.M. or S 9-12 A.M., if there are no conflicts. Kimball 215. Mr. Simpson.

An introduction to materials science for engineering students. Includes basic concepts and their application to selected properties of solids and selected areas of processing of materials. The concepts include bonding of atoms in molecules and crystals, energy bands, ideal and nonideal crystalline and noncrystalline structures, microstructures, equilibrium behavior of materials and kinetic behavior of materials. Plastic deformation, creep, fatigue, ferromagnetism, conductivity in metals, semiconductivity and superconductivity are included. Processing is by solidification, sintering, zone refining, heat treating, and plastic working.

## Theoretical and Applied Mechanics

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

Four hours credit. Prerequisite, Eng. 211 or equivalent. Lectures and recitations M T W Th F 11; computing-laboratory M Th 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: J. L. Meriam, *Dynamics*.

## MATHEMATICS

Math. 192. CALCULUS FOR ENGINEERS (U)

Four hours credit. Prerequisite, Math. 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)

Three hours credit. Prerequisite, Math. 293. M T W Th F 8-8:50. White B-29.

Linear differential equations, quadratic forms and eigenvalues, differential vector calculus, applications. Text: Block, Cranch, Hilton, Walker, *Engineering Mathematics. Vol. II*.

For other listings of the Department, see pages 51-52.

## MODERN FOREIGN LANGUAGES AND LITERATURE

### Portuguese, Quechua

See Latin American Language and Area Program, pages 72-73.

## Romance Studies

Span. 497. SOCIOLOGICAL IMPLICATIONS OF THE NOVELA INDIANISTA (U, G)

Three hours credit, or two hours credit for students coregistered in Quechua 101S as a component of the Latin American Language and Area Program (see page 72). M T W Th F 2-3. Lincoln 304. Mr. Arguedas.

Lectures in Spanish by Dr. José María Arguedas, the distinguished Peruvian novelist, on Spanish-American authors concerned with Indian problems.

For listing of other languages: see Classics, page 35, Modern Foreign Languages and Literature, pages 53-55, and the Asian Language Program, pages 64-65.

## PHILOSOPHY

Phil. 311. PROBLEMS IN THE PHILOSOPHY OF MIND (U,G)

Four hours credit. M T W Th F 9-9:50. Goldwin Smith 221. Mr. Hugly.

This course covers some of the basic problems connected with philosophical inquiries into our common knowledge of ourselves and others. Skeptical problems concerning this knowledge will be thoroughly discussed. The epistemological character of some important theories of mind will be investigated. Some topics will be: the characterization of different kinds of psychological explanation; the analysis of concepts of observation and behavior.

For other listings of the Department, see page 56.

## PHYSICS

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

Three hours credit. Prerequisites, Physics 121 and at least simultaneous registration in Math 192, or consent of the instructor. Lectures, T Th 9:30-10:45. Rockefeller A. Recitations, M W F 9:30-10:45. Rockefeller 103. Laboratory, T 2-5. Rockefeller 252. Mr. Newhall.

Rotation of rigid bodies. Simple harmonic motion. The properties of the fundamental forces: gravitational, electromagnetic and nuclear. At the level of *Introductory Analytical Physics* (4th ed.) by Newhall. Fee, \$5.

Physics 234. INTRODUCTORY ANALYTICAL PHYSICS IV (U)

Three hours credit. Prerequisites, Physics 233 and at least simultaneous registration in Math 294, or consent of the instructor. Lectures, W F 12-12:50. Rockefeller A. Recitations, M T Th S 12-12:50. Rockefeller 104. Mr. Edwards.

Modes of oscillation, waves, polarization, interference and diffraction. Selected topics from contemporary physics such as relativity, quantum effects, atomic and x-ray spectra, nuclear structure and reactions, and solid state physics. At the level of *Waves and Oscillations*, 1966 (Vol. 3, of Berkeley Physics Course) by Crawford, and of *Elementary Modern Physics*, 1960, by Weidner and Sells.

\*Physics 236. LABORATORY TO ACCOMPANY PHYSICS 234 (U)

One hour credit. Prerequisite, coregistration in Physics 234, or consent of the instructor. T F 2-5. Rockefeller 30. Mr. Lee.

Experiments in optics and contemporary physics. Fee, \$5.



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

One to three hours credit. Prerequisites, Physics 360 and a junior-senior course in contemporary physics (e.g., Physics 436), or consent of the instructor. Laboratory open M T W Th F 2-5. Clark 308. Messrs. Silsbee and Browman.

Associated with the Physics 510 laboratory; see topics in Physics 510. Fee, \$5 per credit hour.

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

Three hours credit. Prerequisites, Physics 410 and 443, or consent of the instructor. M T W Th F 2-5, Clark 308. Messrs. Silsbee and Browman.

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 about five or six experiments, selected to meet his individual needs. Stress is laid on independent work. Fee, \$15.

**Physics 574. INTERMEDIATE QUANTUM MECHANICS (G)**

Four hours credit. Prerequisites, Physics 562, 572, and Math. 416, or consent of the instructor. M T W Th F 11-12:15, Rockefeller 103, and two additional hours each week to be arranged. Mr. K. Wilson.

Discussion of various applications of quantum mechanics such as collision theory, theory of spectra of atoms and molecules, theory of solids, emission of radiation, and relativistic quantum mechanics. At the level of *Quantum Mechanics of One- and Two-Electron Atoms* by Bethe and Salpeter.

(For other offerings of the Department, see pages 56 and 57, and also Other Programs, page 61.)

## SIX-WEEK SESSION

June 26–August 9

For registration procedures and other information, see pages 5 to 27.

Students admitted to this session may not elect courses from the eight-week session. They may elect a course from among the Special Programs, listed under Other Programs, pages 60 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 ECONOMICS, AGRICULTURAL EDUCATION, AGRICULTURAL ENGINEERING

(See Other Programs, pages 61 and 62.)

## ANTHROPOLOGY

### Anthro. 101. CULTURAL ANTHROPOLOGY (U,G)

Three hours credit. M T W Th F 9:30–10:45. Goldwin Smith 128. 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 fellowmen, and defined their place in the cosmos. An inquiry into human nature and its expression in man's institutional and intellectual creations.

### Anthro. 102. THE EVOLUTION OF MAN (U,G)

Three hours credit. M T W Th F 11–12:15. Goldwin Smith 128. Miss Richards.

An exploration of the archaeological and fossil record of human evolution; emphasis is on the varied ways of uncovering, interpreting, and understanding man's biological and cultural development from the origin of man to the rise of civilization.

### Anthro. 441. CULTURE AND SOCIETY IN SOUTH ASIA (U,G)

Four hours credit. M T W Th F 9:30–10:45. McGraw 305. Mr. Hazelhurst.

A survey of the social, economic, political, and religious institutions of the countries of South Asia. Both the traditional cultures and the changes which are taking place are considered.

### Anthro. 545. SEMINAR: SOUTH ASIA (U,G)

Two hours credit. M T W Th F 11–12:15. McGraw 305. Mr. Hazelhurst.

The seminar will be adapted to the interest of the students enrolled. Suggested topics will include: text and context in Hinduism, village life in South Asia, problems in Indian historiography, Indian national character, India as portrayed in travelers' accounts, the impact of the West on Indian

social and intellectual traditions, the origin and growth of Indian nationalism, problems of social and economic change, parliamentary institutions in India, etc.

(See also Area Study Programs, page 62 and Latin American Language and Area Program, page 72.)

## ART

### Painting, Sculpture and Graphic Arts

See Summer Studios in Art (Page 74).

### History and Appreciation

Hist. of Art 202. INTRODUCTION TO RENAISSANCE AND MODERN ART (U,G)

Three 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)

Three 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 Hist. of Art 202. No practice of art is involved.

## BIOLOGICAL SCIENCES

\*Biol. Sci. 101. GENERAL BIOLOGY (U)

Three hours credit. Registration permitted only to students who register also for Biol. Sci. 102. Lectures, M T W Th F 9 and 11. Plant Science 233. Laboratory, M T W Th F 1:40-4:30. Roberts 22. Mrs. McFadden and staff.

Designed for students intending to specialize in some aspect of biology or biochemistry, and also for those planning to major in other subjects (such as the social sciences or the humanities) but who want to obtain a thorough

knowledge of the phenomenon of life as part of their general education. Plant and animal materials are considered together rather than in separate units. Course 101 covers cellular biology, the biochemistry of metabolism, physiology and anatomy, and behavior. Course 102 includes genetics, developmental biology, evolutionary theory, the biology of populations and communities, the origin of life, and the evolutionary patterns in the plant and animal kingdoms. Each topic is considered in the light of modern evolutionary theory. The laboratory work is designed to give first-hand experience with the materials discussed in lecture. Fee, \$10.

**\*Biol. Sci. 102. GENERAL BIOLOGY (U)**

Three hours credit. A continuation of Biol. Sci. 101, and open only to persons concurrently registered. Time and place of class meetings same as for Biol. Sci. 101. Mrs. McFadden and staff.

For course description see Biol. Sci. 101. Fee, \$10.

**\*Biol. Sci. 270. BIOLOGY OF VERTEBRATES (U,G)**

Four hours credit. Prerequisite, an introductory course in biology or zoology. Lectures, M T W Th F 9:30-10:45. Rice 300. Laboratory, T W 2-5. Fernow 14. Occasional early morning field trips to be scheduled in lieu of regular laboratory period. Mr. Brower.

An introduction to the evolution, classification, and natural history of vertebrate animals. Laboratory work will include studies on structure, classification and identification, and various aspects of ecology and behavior. Field work will emphasize the distribution ecology, behavior, and life histories of local vertebrates, and special projects designed to introduce the student to some of the methods used in vertebrate research. Fee, \$10.

## CHEMISTRY

*Students and members of the teaching staff are required to wear safety glasses or prescribed eye protective devices in all chemistry laboratories.*

**\*Chem. 107u. GENERAL CHEMISTRY (U)**

Three hours credit. *June 26-July 19.* Prerequisite, at least 2 units of mathematics, and one unit or more of secondary-school chemistry. Registration permitted only to students who register also for Chemistry 108u. Lectures, M T W Th F 8-9:50. Recitations, T W Th 3:30-4:30. Lectures and recitations held in Rockefeller 108. Laboratory, M T W Th F 10-1. Baker Lab. 150. Mr. Weiser and assistants.

The important chemical principles and facts are covered, with considerable attention given to the quantitative aspects and to the techniques which are important for further work in chemistry. Texts: Sienko and Plane, *Chemistry* (3d Ed.); Sienko and Plane, *Experimental Chemistry* (3d Ed.). Fee, \$7.50.

**\*Chem. 108u. GENERAL CHEMISTRY (U)**

Four hours credit. *July 22-August 9.* Prerequisite, Chemistry 107u or its equivalent. Lectures, M T W Th F 8-9:50. Recitations, T W Th 3:30-4:30. Lectures and recitations held in Rockefeller 108. Laboratory, M T W Th F 10-1. Baker Lab. 150. Mr. Weiser and assistants.

A continuation of Chemistry 107u. The laboratory includes a simplified scheme of qualitative analysis. This course serves as a prerequisite for Chemistry 236 or Chemistry 353. Texts: as listed above for Chemistry 107u. Fee, \$7.50.

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

Four 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. Rockefeller 109. Mr. G. Warren Smith and assistants.

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* (2d Ed.).

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

Two hours credit. Must be taken with Chemistry 353. Laboratory, M T W Th F 10-12:50. Baker Lab. 250. Mr. G. Warren Smith and assistants.

Laboratory experiments on the preparation and reactions of typical aliphatic and aromatic organic compounds. Fee, \$15.

## CITY AND REGIONAL PLANNING

(See Other Programs, pages 65-66 and 67.)

## CLASSICS

### Greek

#### Greek 101. GREEK FOR BEGINNERS (U)

Three hours credit. M T W Th F 9-10:15 and 11-12:15. Goldwin Smith 124. Mr. Tyler.

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)

Three hours credit. Same time schedule as Greek 101. Must be taken with Greek 101. Goldwin Smith 124. Mr. Tyler.

Readings from Plato.

### Latin

#### Latin 105. LATIN FOR BEGINNERS (U)

Three hours credit. M T W Th F 9-10:15 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.

## 36 SIX-WEEK SESSION

### Latin 106. LATIN FOR BEGINNERS (U)

Three hours credit. Same time schedule as Latin 105. Must be taken with Latin 105. Selected readings. Goldwin Smith 120A. Mr. Mitchell.

## COMPARATIVE LITERATURE

See listings under English, page 42.

## CONSERVATION

(See Other Programs, pages 62 and 67.)

## ECONOMICS

### Econ. 103. MODERN ECONOMIC SOCIETY (U)

Three hours credit. M T W Th F 9:30-10:45. Goldwin Smith 225.

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 governmental policy.

### Econ. 104. MODERN ECONOMIC SOCIETY (U)

Three hours credit. M T W Th F 8:00-9:15. Goldwin Smith 225.

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 MICROECONOMIC THEORY (U,G)

Four hours credit. Prerequisite, 103 or its equivalent. M T W Th F 11:00-12:15. Goldwin Smith 264.

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 MACROECONOMIC ANALYSIS (U,G)

Four hours credit. Prerequisite, Economics 104 or its equivalent. M T W Th F 9:30-10:45. Goldwin Smith 264. Mr. Feketekuty.

An introduction to the theory of national income determination and economic growth in alternative models of the national economy; the interaction and relation of aspects of these models to empirical aggregate economic analyses.

### Econ. 361. INTRODUCTION TO INTERNATIONAL ECONOMIC THEORY AND POLICY (U,G)

Four hours credit. Prerequisite, Economics 103-104 or their equivalent. M T W Th F 9:30-10:45. Goldwin Smith 234. Mr. Feketekuty.

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 principles, policies, and institutions from precapitalist origins to the present.

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

Four hours credit. Prerequisite, Economics 103-104 or consent of the instructor. M T W Th F 11:00-12:15. Goldwin Smith 225.

Study of the role of the state in initiating 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.

**Econ. 699A. WORKSHOP ON ECONOMIC POLICY. (G)**

Noncredit. Prerequisite, consent of instructor. Hours to be arranged. Mr. Selden.

An experimental offering designed to stimulate research in a particular problem area; the economic policy of Western Europe.

**Econ. 699B. WORKSHOP ON ECONOMIC DEVELOPMENT (G)**

Noncredit. Prerequisite, consent of instructor. Hours to be arranged. Mr. Morse.

An experimental offering designed to stimulate research in a particular problem area; economic development and institutional exchange.

Graduate students, with the consent of the instructor concerned, may choose one of the two courses being offered above.

## EDUCATION

The following program is presented 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 in Education, in teaching the courses offered in the Summer Session and in other special programs.

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

Ann Gunning, Elementary Coordinator, Educational Services Center, Ithaca Public Schools

Eleanor D. Macklin, Research Associate, Child Development and Family Relationships, Cornell University

Betty J. McKnight, Staff Associate, Eastern Regional Institute for Education, Syracuse, New York

Joan R. Yanuzzi, Director of Guidance, Sayre Area Schools, Sayre, Pennsylvania

## Educational Administration

**Ed. 563. ELEMENTARY SCHOOL ADMINISTRATION (G)**

Three hours credit. M T W Th F 9:30-10:45. Warren 201. Mrs. Egner, Mr. Hixon, and Miss Gunning.

Organized to enable recognition and cognition of the administrative functions essential to an effective elementary school. Analysis will include the

elementary school as a unique institution, legal bases and controls, innovation in organization and curriculum, administration of instructional and non-instructional personnel, and community relationships.

**Ed. 569. PERSONNEL ADMINISTRATION IN EDUCATIONAL INSTITUTIONS (G)**

Three hours credit. M T W Th F 11:00-12:15. Warren 101. Mr. Hixon.

Designed to provide an introduction to modern psychological and sociological perspectives of personnel administration as applied to educational institutions in general. Three purposes are paramount: (1) to acquaint the student with a variety of ways of conceiving the problems of personnel administration; (2) to acquaint the student with relevant research, and (3) to develop some facility in the analysis of conceptual schemes and research projects.

## Education, Agricultural

See listings under Other Programs:

Ed. 532u. Methods and Materials of Teaching Agriculture. Page 62.

Ed. 534u. Education for Leadership of Youth and Adult Groups. Page 62.

## Curriculum and Instruction

**Ed. 440S. TEACHING SOCIAL STUDIES IN SECONDARY SCHOOLS (U,G)**

Three hours credit. M T W Th F 12:30-1:45. Warren 101. Mr. W. T. Lowe.

An examination of curriculum, methods and materials of the social sciences and history in the secondary school.

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

Three hours credit. M T W Th F 9:30-10:45. Warren 101. Mr. Pauk.

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

**Ed. 546. TEACHING READING AND LANGUAGE SKILLS (G)**

Three hours credit. M T W Th F 12:30-1:45. Warren 201. Miss Wardeberg.

Materials and techniques in teaching the language arts in the elementary school; special emphasis on the teaching of reading.

## Educational Psychology and Measurement

**Ed. 417. PSYCHOLOGY OF ADOLESCENCE (U,G)**

Three hours credit. M T W Th F 9:30-10:45. Warren 160. Mrs. Macklin.

Designed to be of help to all who plan to work with adolescents, either as parents, teachers, or counselors—to acquaint them with adolescent development and to provide insight into the causes of adolescent behavior. The



major objectives of the course include: (1) an examination of the interrelationships among the five major areas of an adolescent's development: physical, emotional, social, moral, and intellectual; (2) a sympathetic understanding of some of the major problems of adolescence; (3) an acquaintance with research and writing in the field of adolescence; and (4) an exploration of how adults may facilitate healthy development in adolescents. May be applied toward certification of secondary school teachers and guidance counselors.

**Ed. 511. EDUCATIONAL PSYCHOLOGY (U,G)**

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

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

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

Three hours credit. M T W Th F 8-8:50, 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. BEHAVIOR PROBLEMS IN THE SCHOOL (G, U by permission)**

Three hours credit. M T W Th F 12:30-1:45. Warren 160. Mr. Fernald.

Designed to deal with the application of certain principles of psychology and guidance toward the development of a clearer understanding of adjustment problems of school-age pupils, both elementary and secondary. Emphasis will be on the identification of students with special needs in the areas of social and emotional problems and developing remedial programs for these students, leading to more satisfactory adjustment within the school situation. Attention will be given to the potential "drop-out," aggressive behavior, and withdrawn behavior (school phobia). Special attention will be given to theoretical explanations as well as specific diagnosis of causes.

(See also listing under Psychology, Psych. 325, page 58.)

## Guidance and Personnel Administration

**Ed. 582. EDUCATIONAL AND VOCATIONAL GUIDANCE (G)**

Two hours credit. M T W Th F 11-11:50. Warren 232. Mr. Bresee.

An introductory survey course that 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.

**Ed. 583. COUNSELING (G)**

Two hours credit. M T W Th F 9-9:50. Warren 232. Mr. Bresee.

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

Ed. 585. OCCUPATIONAL AND EDUCATIONAL INFORMATION (G)

Four hours credit. M T W Th F 12:00-12:50. Additional hour to be arranged. Field trips and workshop periods, T and Th 2-4:15. Warren 260. Mrs. Yanuzzi.

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.

See also under Other Programs:

Ed. 587u. Practicum in Measurement and Appraisal for Counselors (page 70).

Ed. 588u. Case Studies in Counseling (page 70).

I.&L.R. 451u. Dynamics of Occupational Structures in Work Organizations (page 70).

See listing under Educational Psychology (page 39).

Ed. 555. Use and Interpretation of Tests in Guidance and Personnel Administration.

See also course offerings in Industrial and Labor Relations, Mental Health, Psychology, and Sociology.

Guidance courses tentatively scheduled for the Summer Session of 1969: Educational and Vocational Guidance, Group Techniques in Guidance, Organization and Administration of Guidance Programs, Case Studies in Counseling.

## History, Philosophy and Sociology of Education

Ed. 470. EDUCATIONAL ISSUES IN A DEMOCRACY (U,G)

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

A consideration of persistent and significant educational issues facing the American society and pertinent to the work of the teacher.

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

Three hours credit. M T W Th F 8-9:15. Warren 101. 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 of education.

See also under Sociology:

Soc. 341. Sociology of Education (page 58).

## Home Economics Education

H.E.Ed. 500. SPECIAL PROBLEMS FOR GRADUATE STUDENTS (G)

Credit and hours to be arranged. Department faculty.

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

H.E.Ed. 599. MASTER'S THESIS AND RESEARCH (G)

Credit and hours to be arranged. Registration with permission of the Chairman of the Graduate Committee and the instructor. Department graduate faculty.

**H.E.Ed. 699. DOCTORAL THESIS AND RESEARCH (G)**

Credit and hours to be arranged. Registration with permission of the Chairman of the Graduate Committee and the instructor. Department graduate faculty.

See also under Other Programs (pages 70-72):

H.E.Ed. 533u. Teaching Home Economics at the Secondary Level.

For other listings of the College of Home Economics, see pages 48-50.

## Reading and Study Skills

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

Noncredit. *July 1-August 1.* M W 2:00-3:30. Reading-Study Center, 304 Olin Hall. Mr. Warren.

The aim is the improvement of reading and study skills. In the area of *reading*, students learn to improve both their reading speed and comprehension. Students are taught how to read selectively; how to distinguish main ideas from supporting material; how to determine an author's thesis and tone; and how to comprehend scholarly and technical material. As part of their training in speed reading students will have the opportunity to work daily with the reading accelerators in the reading laboratory.

Students will also receive instruction in the basic *study skills* which are essential for efficient and effective study. Topics covered will be efficient planning and use of time, recording and remembering lecture notes, preparing for and taking examinations, research procedures and techniques, and marking textbooks and taking notes on readings.

Students may register for this course in Lynah Hall on June 26, registration day. A fee of \$52.50 will be payable at this time. For additional information, address Mr. Walter Pauk, Director, Reading-Study Center, 304 Olin Hall, Cornell University, Ithaca, New York 14850.

## Science Education

**Ed. 407. TEACHING OF ELEMENTARY SCHOOL SCIENCE (U,G)**

Three hours credit. Lectures, M T W Th F 8-9:15. Laboratory W 2-4:30. Stone 7. Miss McKnight.

The content and methods of elementary school science and nature study, with field work and laboratory experience useful in classroom and camp. Designed particularly for those who are preparing to teach, and who are responsible for teaching or supervising elementary school science. Attention will be given to several new curricula, especially the A.A.A.S. Process Approach.

**\*Ed. 426. FIELD NATURAL HISTORY (U,G)**

Three hours credit. Lectures, T and Th 1:40-3. Laboratory, T and 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.

## Other Programs for Teachers

Agricultural Education (see pages 61-62).

Area Study Programs for Secondary School Teachers (see page 62).

Unit Courses in Guidance (see page 70).

Home Economics Unit Programs (see pages 70-71).

Textiles and Clothing (see page 71).

## ENGLISH

Comp. Lit. 301. MASTERWORKS OF WESTERN LITERATURE, I (U,G)

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

Study and discussion of great books of the Western tradition: selections from the Bible, the *Iliad*, *The Divine Comedy*, *King Lear*, *Paradise Lost*, and *Faust*.

Comp. Lit. 302. MASTERWORKS OF WESTERN LITERATURE, II (U,G)

Four hours credit. M T W Th F 1:30-2:45. Goldwin Smith 248. Mr. Shaw.

Study and discussion of great books of the Western tradition: selected Greek tragedies, the *Aeneid*, *Don Quixote*, plays by Molière, *Madame Bovary*, *Notes from the Underground*, Chekhov's *The Cherry Orchard*, and Camus' *The Stranger*.

Engl. 303. SPECIAL FORMS OF WRITING (U,G)

Four hours credit. M T W Th F 8-9:15. Goldwin Smith 248. Mr. Ammons.

A workshop course in the writing of verse, fiction, and allied forms. Classroom discussion of students' work and individual consultation.

Engl. 330. MAJOR AMERICAN WRITERS (U,G)

Four hours credit. M T W Th F 8-9:15. Goldwin Smith 160. Mr. Kaufman.

Critical investigations of selected writings of Emerson, Thoreau, Hawthorne, Melville, Emily Dickinson, and Twain.

Engl. 344. THE SHORT STORY AND THE MODERN WORLD (U,G)

Four hours credit. M T W Th F 1:30-2:45. Goldwin Smith 236. Mr. Hathaway.

Readings from Chekhov, Joyce, Kafka, Lawrence, Mann, Faulkner, Welty, and Flannery O'Connor. A study of short fiction both as a modern literary form and as an examination of the ways that modern man looks at himself and his environment.

Engl. 345. SIX MAJOR POETS (U,G)

Four hours credit. M T W Th F 11:00-12:15. Goldwin Smith 236. Mr. Fike.

A close critical study of selected poems by Donne, Jonson, Keats, Browning, Hopkins, and Frost.

Engl. 346. MODERN DRAMA FROM IBSEN TO BECKETT (U,G)

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

A study of the art and contemporary relevance of the major playwrights from the 1880's to the 1960's, including Ibsen, Chekhov, Strindberg, O'Casey, O'Neill, Miller, Genet, and Beckett.

Engl. 368. SHAKESPEARE: THE TRAGEDIES (U,G)

Four hours credit. M T W Th F 11:00-12:15. Goldwin Smith 162. Mr. Fogel.

A critical study of the development and achievement of Shakespearean

# KEY TO THE CAMPUS MAP ON THE FOLLOWING PAGES

- Agronomy F4
- Alumni (Athletic) Fields F5
- Alumni House D3
- Artificial Breeders H7
- Bacon Athletics Cage E6
- Bailey Hall E4, auditorium
- Baker Residences (men) B4
- Baker Laboratory D3, chemistry
- Balch Halls E2, women's residences
- Bard Hall C6, materials science & eng.
- Barnes Hall C5, Campus Store, auditorium
- Barton D5, military training, Safety Div.
- Beebe Lake; Tripphammer Falls E-F3
- Big Red Barn D4, alumni center
- Caldwell Hall E4, agronomy
- Campus Store, Barnes-C5, Sheldon Ct.-C7
- Career, Summer Plans, & Placement Ctr., 14 East Av.
- Carpenter C6, eng. library & admin.
- Cascadilla Hall B7
- Clark Hall D4, physical sciences
- Collyer Boat House, Cayuga Lake Inlet
- Comstock Hall E4, entomology, limnology
- Comstock House D2, women's residence
- Cornell Quarters F-G7, student families
- Crescent E6, football stadium
- Dairy Cafeteria (Stocking Hall) G-H5
- Day Hall C-D5, Univ. administration
- Dickson Hall E2, women's residence
- Donlon Hall E1, women's residence
- Fernow Hall F4, conservation
- Filter Plant J3
- 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
- Langmuir Lab., Research Pk. H2
- Library Tower C4
- Lincoln Hall C3, music, speech & drama
- Lynah Hall E-F5, ice skating
- Malott Hall D4, business & public admin., hospital admin.
- Mann F4, agric.-home econ. library, Finance Office, Bailey Hortorium
- McGraw Hall C4, geological sciences, sociology, anthropology
- Minns Garden E4
- Moakley House H2, recreation, golf
- Morrill Hall C4, modern lang., psych.
- Morrison Hall H5, animal husbandry
- Helen Newman Hall E2, women's phys. ed.
- Newman Lab. D-E3, nuclear studies
- Noyes Lodge E3, recreation, cafeteria
- Noyes Student Center A5
- Nuclear Reactor Lab. D6
- Observatory F2
- Olin Hall C5, 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, and 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.
- Radiophysics & Space Research D4
- Rand D3, Computing Ctr.
- Research Park H2
- 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. sciences, veg. crops
- Rockefeller Hall D4, physics, eng. physics
- Sage Chapel C5
- Sage Graduate Center D5
- Savage Hall D-E4, nutrition
- Schoellkopf Field and Hall E6, athletics
- Service Building F7
- Sheldon Ct. C7, Univ. Publications, Off.-Campus Housing, Campus Store
- Sibley Hall C3, arch., art, planning; 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
- Synchrotron Bldg. G6
- Taylor (Anabel) Hall C6, interfaith ctr.
- Taylor (Myron) Hall C6, law
- Teagle Hall E5, men's phys. ed., sports
- Television-Film Center H5
- Thurston Court B2, student residences
- Thurston C6, theoretical & applied mech.
- Toboggan Lodge E3, recreation
- University, Sperry, Class of '26, & Class of '17 Halls (men) B5
- University Press C2
- Upton Hall D6, mech. eng., computer sci.
- Uris (Undergraduate) Library C4
- U. S. Nutrition Lab. H4
- Utilities Section E3
- Van Rensselaer Hall E4, 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.

A

B

C

D

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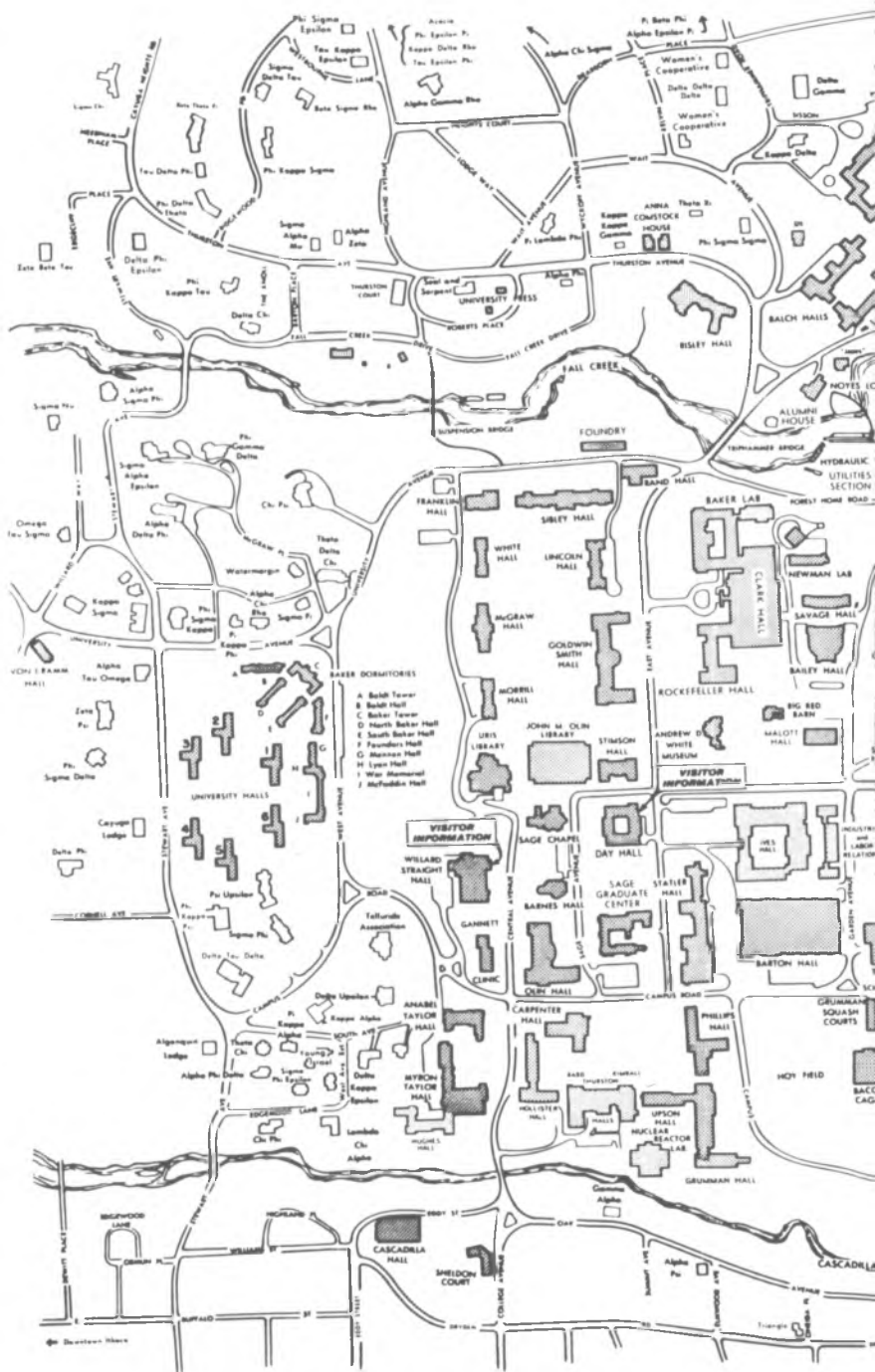
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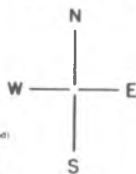
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Scale in Feet

PHYSICS LABORATORY

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Printing Division  
Cornell University, Ithaca, N. Y.  
1966

## 46 SIX-WEEK SESSION

tragedy from *Romeo and Juliet* to *Coriolanus*, with special emphasis on *Hamlet*, *Othello*, and *Lear*.

### Engl. 373. THE AMERICAN POLITICAL NOVEL (U,G)

Four hours credit. M T W Th F 1:30-2:45. Goldwin Smith 160. Mr. Strout.

A study of the American political novel in its historical context and as a literary form. Readings in Cooper, DeForest, Henry Adams, Dos Passos, Steinbeck, Hemingway, Cozzens, Warren, and others.

### Engl. 375. THE LITERATURE OF BELIEF AND UNBELIEF (U,G)

Four hours credit. M T W Th F 9:30-10:45. Goldwin Smith 160. Mr. Fike.

A critical study of selected modern poetry and fiction with special attention to the portrayal of the tension between faith and doubt. Readings will include Hardy, Wallace Stevens, Hart Crane, Robert Penn Warren, William Golding, Camus, Salinger, and others.

### Engl. 390. MODERN THEORIES OF POETRY (U,G)

Four hours credit. M T W Th F 11:00-12:15. Goldwin Smith 248. Mr. Ammons.

Discussions of recently published poems against a background of twentieth-century critical theory and practice.

### Engl. 920. RESEARCH AND GUIDANCE (G)

Credit and hours to be arranged. Messrs. Caputi and Shaw.

## GEOLOGICAL SCIENCES

### \*Geol. Sci. 101u. INTRODUCTORY GEOLOGICAL SCIENCE (U)

Three hours credit. *June 26 to July 19*. Registration limited to 25 students. Lectures, M T W Th F 9:30-11:20. McGraw 165. Laboratory, M T W Th 1:30-4. McGraw 265. Mr. Cole and assistant.

An introduction to geological science designed to give general students a comprehensive understanding of earth materials, processes, features, and history. Field trips during certain laboratory periods. Text: Leet and Judson, *Physical Geology*; Geology 101 Laboratory Manual. Fee, \$10.

### \*Geol. Sci. 102u. INTRODUCTORY GEOLOGICAL SCIENCE (U)

Three hours credit. *July 22 to August 9*. Prerequisite, Geological Science 101 or its equivalent. Registration limited to 25 students. Lectures, M T W Th F 9:30-11:20. McGraw 165. Laboratory, M T W Th 1:30-4. McGraw 265. Mr. Wells and assistant.

Continuation of Geological Science 101, the last half of the course being devoted to the principles of interpretation of earth history, evolution of continents, oceans, mountain systems and other features, and development of organic life. Field trips during certain laboratory periods. Text: Leet and Judson, *Physical Geology*; Dunbar, *Historical Geology*; Geology 102 Laboratory Manual. Fee, \$10.

## GOVERNMENT

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

Three hours credit. M T W Th F 11-12:15. West Sibley B-1. Mr. Heberle.

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)**

Three hours credit. M T W Th F 8-9:15. West Sibley B-1. Mr. Simmons.

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. 203. INTRODUCTION TO POLITICAL THEORY (U,G)**

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

A survey of the development of Western political theory from Plato to the present. Readings from the work of the major theorists and an examination of the relevance of their ideas to contemporary politics will be stressed.

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

Four hours credit. Prerequisite, a course in American government or its equivalent. M T W Th F 9:30-10:45. West Sibley 318. Mr. Berns.

A study of the law of the 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. 319. THE WARREN COURT AND CIVIL LIBERTIES (U,G)**

Four hours credit. Prerequisite, a course in American government or its equivalent. M T W Th F 11-12:15. West Sibley 318. Mr. Berns.

A study of contemporary trends in Court interpretation of the Constitution, especially with reference to civil liberties. Class discussion of assigned cases will be emphasized.

**Gov. 342. CONTEMPORARY FRENCH POLITICS (U,G)**

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

An analysis of the institutions and patterns of behavior that contribute to the shaping and operation of current French political life.

## HISTORY

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

Three hours credit. M T W Th F 8-9:15. W. Sibley 101. Mr. McCormick.

A general survey of American history from Reconstruction to the present.

**Hist. 320. LATIN AMERICAN HISTORY SINCE INDEPENDENCE (U,G)**

Four hours credit. M T W Th F 9:30-10:45. W. Sibley 101. Mr. Graham.

A survey of the nineteenth and twentieth centuries, using a topical approach. Mexico, Brazil, and Argentina receive most emphasis.

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

Four hours credit. M T W Th F 11-12:15. W. Sibley 102. 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.

## 48 SIX-WEEK SESSION

### Hist. 384. HISTORY OF UNITED STATES FOREIGN RELATIONS, 1890 TO THE PRESENT (U,G)

Four hours credit. M T W Th F 11-12:15. W. Sibley 101. Mr. McCormick.

The growth of American foreign policy and the relationship of changes in United States internal affairs to the evolution of foreign policy.

### Hist. 463. MODERN RUSSIAN HISTORY FROM THE EARLY TWENTIETH CENTURY TO THE PRESENT (U,G)

Four hours credit. M T W Th F 9:30-10:45. W. Sibley 102. Mr. MacKenzie.

The modernization of Russia during the past century in its political, economic, social, and ideological aspects.

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

Two hours credit. M T W Th F 2. W. Sibley 318. Mr. MacKenzie.

A more thorough study of some of the historical problems raised in History 463. Limited to graduate students who are enrolled in that course.

### Hist. 488. BRAZIL SINCE INDEPENDENCE (G)

Two hours credit. M T W Th F 2. W. Sibley 102. Mr. Graham.

Seminar discussion of important topics in Brazilian history. Limited to graduate students who are enrolled in History 320.

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

Two hours credit. M T W Th F 2. Meeting place to be arranged. Mr. Clubb.

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

### Hist. 496. HISTORY OF SOUTHEAST ASIA AFTER THE FIFTEENTH CENTURY (G)

Four hours credit. M T W Th F 9:30-10:45. W. Sibley 328. Mr. Wyatt.

### Hist. 696. SEMINAR IN SOUTHEAST ASIAN HISTORY (G)

Two hours credit. M T W Th F 12 noon. Meeting place to be arranged. Mr. Wyatt.

For graduate students with appropriate preparation.

See also Area Study Programs, page 62, and Asian Language Program, page 64.

## HOME ECONOMICS

### Child Development and Family Relationships

#### C.D.&F.R. 115. THE DEVELOPMENT OF HUMAN BEHAVIOR (U)

Three hours credit. M T W Th F 11-12:15. Goldwin Smith D. Mr. Hoffman.

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

(See also Psychology 101, page 57.)

## Food and Nutrition

### F.&Ntr. 500. SPECIAL PROBLEMS FOR GRADUATE STUDENTS (G)

Credit and hours to be arranged. Department faculty.

For graduate students recommended by their chairmen and approved by the instructor in charge for independent, advanced work. Experience in research laboratories in the department may be arranged.

### F.&Ntr. 599. MASTER'S THESIS AND RESEARCH (G)

Credit and hours to be arranged. S U grades optional. Registration with permission of instructor. Department Faculty.

### F.&Ntr. 699. DOCTOR'S THESIS AND RESEARCH (G)

Credit and hours to be arranged. S U grades optional. Registration with permission of the instructor. Department faculty.

## Home Economics Education

(See listing under Education, page 40 and under Other Programs, page 70.)

## Household Economics and Management

### \*H.E.M. 500. SPECIAL PROBLEMS FOR GRADUATE STUDENTS (G)

Credit and hours to be arranged. Department faculty. S U grades optional. For graduate students recommended by their chairman 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. 599. MASTER'S THESIS AND RESEARCH (G)

S U grades optional. Registration with permission of the instructor and chairman of graduate committee. Department staff.

Fee will be dependent on the nature of the problem.

### \*H.E.M. 699. DOCTOR'S THESIS AND RESEARCH (G)

S U grades optional. Registration with permission of the instructor and chairman of graduate committee. Department staff.

Fee will be dependent on the nature of the problem.

## Textiles and Clothing

### T. & Clo. 215. APPAREL DESIGN: FLAT PATTERN DESIGNING (U,G)

Three hours credit. 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 8-10:45, plus independent studio work. Van Rensselaer 217. Miss Sassaman.

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.

**T. & Clo. 445. APPAREL DESIGN: TAILORING PROCESSES (U,G)**

Three hours credit. Prerequisite, a college course in flat pattern designing. Registration limited to 16 students. Lecture and laboratory, M T W Th F 8-10:45, plus independent studio work. Van Rensselaer 215. Miss Ager.

Design in apparel achieved through structural potentials of fabric. Processes related to fabric characteristics and to style, cost, and end use. Opportunity for students to explore, adapt and create processes, and to evaluate results in terms of design quality.

**\*T. & Clo. 500. SPECIAL PROBLEMS IN TEXTILES AND CLOTHING (G)**

Credit and hours arranged. Registration by permission. Department faculty.

For graduate degree candidates recommended by the special committee chairman and approved by the department head and the instructor for independent, advanced work. Students to assume any expense involved unless previously arranged. Fee dependent on nature of problem.

**\*T. & Clo. 599. THESIS AND RESEARCH (G)**

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

(For other listings of the department, see Other Programs, page 71.)

## HOTEL ADMINISTRATION

**HOTEL ADM. 37. TYPEWRITING (U,G)**

Two hours credit. Hotel Elective. M T W Th F 9:30-10:45. Statler 337. Mrs. Seaburg.

The personal needs of college students as well as the basic skills necessary for office jobs are met by this course in elementary typewriting. Instruction is given in the typing of business letters, reports, and tabulations. No previous typing skill needed. Those who have had typing before may enroll in the course to improve their speed and accuracy. Maximum enrollment 35.

**HOTEL ADM. 131A. SHORTHAND THEORY (U,G)**

Two hours credit. Hotel Elective. M T W Th F 11-12:15. Statler 335. Mrs. Seaburg.

The basic theory of Gregg shorthand is completed in this course and the groundwork is laid for dictation and transcription. Those who have had shorthand before may enroll in the course to increase their dictation speed. Maximum enrollment 35.

(See also Other Programs, page 72.)

## INDUSTRIAL AND LABOR RELATIONS

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

Credit and hours 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)

Three hours credit. No prerequisites. Lectures, M T W Th F 9:30-10:45. Ives 116. Laboratory, two sessions each week, to be arranged. Mr. Blumen.

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 and hours to be arranged.

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

(See also listing under Unit Programs in Guidance, page 70.)

## Special Noncredit Seminars and Workshops

In the summer of 1968 the School is again offering a series of one-week noncredit seminars and workshops. These units are designed for practitioners, and, consequently, each will give specific emphasis to an operational area in the field. A special announcement covering the summer program of the School, including details of cost and content, may be obtained by writing to the Assistant Dean for Extension and Public Service, School of Industrial and Labor Relations, Cornell University, Ithaca, New York 14850.

## MATHEMATICS

Math. 111. ANALYTIC GEOMETRY AND CALCULUS (U)

Three 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.

Math. 112. ANALYTIC GEOMETRY AND CALCULUS (U)

Three 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.

Math. 121. ANALYTIC GEOMETRY AND CALCULUS (U)

Three 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 9:00-10:45 and 2:00-3:15. White B-15. Mr. Netanyahu.

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)**

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

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

Three 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)**

Three hours credit. Prerequisite, Mathematics 112 or the equivalent. M T W Th F 11:00-12:15. White B-9.

Infinite series, solid analytic geometry, partial derivatives, multiple integrals.

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

Four hours credit. Prerequisite, Mathematics 200 or 213 or the equivalent. M T W Th F 11:00-12:15. White B-25.

Vectors, matrices, and linear transformations. Affine and Euclidean spaces. Transformation of matrices. Eigenvalues. Emphasis on applications. The additional credit is earned through homework and additional reading. Even during the regular year this course only meets three times a week.

**Math. 370. ELEMENTARY STATISTICS (U,G)**

Four hours credit. Prerequisites, Mathematics 112 or 122 or 202. M T W Th F 9:30-10:45. White B-29.

Topics in probability which are essential to an understanding of statistics; introduction to the principles underlying modern statistical inference and the rational underlying choice of statistical methods in various situations. This is a terminal course, intended for those who will take no further work in this area.

The additional credit is earned through homework and additional reading. Even during the regular year this course only meets three times a week.

## MENTAL HEALTH

**M.H. 1. PRINCIPLES AND PRACTICES IN MENTAL HEALTH (U,G)**

Three hours credit. Lectures, M T W Th F 8. Laboratory, T 2:00-4:30 and additional hours to be arranged. Hollister 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.

## MODERN FOREIGN LANGUAGES AND LITERATURE

High school students who have been admitted to a college for the coming academic year may take any language as undergraduate students.

An option is provided in French and German as follows: the Basic Course sequence, 101 and 102, gives a thorough grounding in the language—listening, speaking, reading, and writing. It is conducted in small groups with native speakers as instructors. The Elementary Reading Course sequence, 131 and 132, concentrates on the comprehension of written texts.

For the Basic Course, all students who have had no previous preparation in the language they elect should register for course 101. Students who have taken previous course work in the language they elect will be placed in 101 or 102 on the basis of College Entrance Examination Achievement scores which they must make available before registration.

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.

Of the courses listed below, those dealing with languages and linguistics are offered by the Division of Modern Languages, and those dealing with literature are offered by the Department of Romance Studies.

For languages other than the following, see page 30, also listings under Classics, page 35, and under Other Programs, pages 64 and 72.

BURMESE, CEBUANO (BISAYAN), CHINESE: See Asian Language Program, pages 64-65.

## French

### Fr. 101. FRENCH (BASIC COURSE) (U)

Six 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. Noblitt and staff.

### Fr. 102. FRENCH (BASIC COURSE) (U)

Six 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. Noblitt and staff.

### Fr. 131u. FRENCH ELEMENTARY READING COURSE (U,G)

Three hours credit. *June 26 through July 19.* Twenty hours of instruction each week. Goldwin Smith 177. Mr. Noblitt and staff.

Designed to help students to acquire a reading knowledge of the language.

**Fr. 132u. FRENCH ELEMENTARY READING COURSE (U,G)**

Three hours credit. *July 22 through August 9.* Prerequisite, 131u or its equivalent. Twenty hours of instruction each week. Goldwin Smith 177. Mr. Noblitt and staff.

Designed to help students to acquire a reading knowledge of the language.

**Fr. 201. INTRODUCTION TO FRENCH LITERATURE (U)**

Three hours credit. Prerequisite: for Cornell undergraduates, satisfactory qualifying examination; for others, four years of high school French or consent of the instructor. M T W Th F 9:30-10:45. Goldwin Smith 281. Mrs. Parrish.

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

**Fr. 353. THE NOVEL FROM 1857 to 1900 (U,G)**

Three hours credit. Prerequisite, two semesters of a college course in French literature. M T W Th F 11-12:15. Goldwin Smith 281. Mrs. Parrish.

The dominant literary doctrines of the period—realism and naturalism—and their expression. Extensive reading of the novelists of the period: Flaubert, Zola, Maupassant, Fromentin, Huysmans, etc. Classroom discussions, written reports.

**Fr. 629. INTRODUCTION TO LITERARY STUDIES (G)**

Four hours credit. Required of all first-year graduate students in Romance Studies. Hours to be arranged. Mr. Selig.

An introduction to methods of literary studies; the history of the field, the basic research tools, the various aspects of literary studies and schools of criticism, such as literary history, stylistics, structuralism, the relationship of literature to other fields such as the visual arts.

## German

**Germ. 101. GERMAN (BASIC COURSE) (U)**

Six 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. P. Lowe and staff.

**Germ. 102. GERMAN (BASIC COURSE) (U)**

Six 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. P. Lowe and staff.

**Germ. 131u. GERMAN ELEMENTARY READING COURSE (U,G)**

Three hours credit. *June 26 through July 19.* Twenty hours of instruction each week. Goldwin Smith 256. Mr. P. Lowe and staff.

Designed to help students to acquire a reading knowledge of the language.

**Germ. 132u. GERMAN ELEMENTARY READING COURSE (U,G)**

Three hours credit. *July 22 through August 9.* Prerequisite, 131u or its equivalent. Twenty hours of instruction each week. Goldwin Smith 256. Mr. P. Lowe and staff.

Designed to help students to acquire a reading knowledge of the language.



## Greek

(See listing under Classics, page 35.)

## Indonesian, Japanese

(See Asian Language Program, page 64.)

## Latin

(See listing under Classics, page 35.)

## Portuguese

(See listing under Latin American Language Program, page 73.)

## Quechua

(See listing under Latin American Language Program, page 72.)

## Russian

Russ. 101. RUSSIAN (BASIC COURSE) (U)

Six hours credit. Students who have previously studied any Russian must take the qualifying examination before registering for this course. Twenty hours of instruction each week. Morrill Hall. Mr. Leed and staff.

## Spanish

Span. 101. SPANISH (BASIC COURSE) (U)

Six 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. Lozano and staff.

## Tagalog, Thai, Vietnamese

(See Asian Language Program, pages 64-65.)

## MUSIC

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

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

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 111. SAGE CHAPEL CHOIR (U)**

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

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

**\*Music 121. INDIVIDUAL INSTRUCTION IN ORGAN (U)**

One hour credit, provided the student is also taking Music 101 for credit. May also be taken without credit. Mr. Paterson.

Fee for one-hour lesson weekly, \$50. Fees for an organ practice schedule: twelve hours weekly \$30; six hours weekly, \$15.

## PHILOSOPHY

**Phil. 101. INTRODUCTION TO PHILOSOPHY (U)**

Three hours credit. M T W Th F 11:00-12:15. Goldwin Smith 221. Mr. Hugly.

This course covers some of the basic problems connected with philosophical ethics and the relations between ethics and religion. The course will also investigate some of the relations obtaining between values, morality and religion in different cultural settings. Text material will be drawn from such philosophers as Plato, Kant, Kierkegaard and Wittgenstein and at least one anthropologist. No previous training in either philosophy or anthropology is either required or assumed.

## PHYSICS

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

Three 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 high school or college Physics, and consent of the instructor. M T W Th F 10-12. One two-hour lecture per week (usually on Mondays), one two-hour seminar-discussion meeting on each of three days of the week, and one two-hour meeting a week either for additional lectures or to view and discuss pertinent instructional movies. Except for the common Monday lectures and for the additional lectures or movies, students are subdivided into class-study groups according to interests and background preparation. Physics 105 is not the equivalent of Physics 101, 121, 201 or 207 of the academic year. Lectures in Rockefeller B. Movies in Rockefeller D. Mr. Parratt.

Principal topics are special relativity and quantum theory. Fee, \$5.

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

Four hours credit. Prerequisites, one year of high school Physics and Math. 111, or consent of the instructor. Mathematically apt students may take this course with simultaneous enrollment in Math. 111. (No credit will be granted if the student has credit for Physics 101 or 121, or the equivalent.) Lectures, M (Rockefeller A) T W Th F (Rockefeller 105) 11-12:15; seminars and laboratory, M T W Th F 1:30-4:30. (Rockefeller 322-4). Mr. Cassel.

Physics 207-208, as a sequence, comprises a first-year college physics course

for students who may major in a natural science or in mathematics. Dynamics of particles, conservation laws, collisions, harmonic oscillations, and special theory of relativity. At the level of *Physics for Students of Science and Engineering*, 1966, Parts I and II, by Halliday and Resnick, or of *Elementary Classical Physics*, Vols. I and II, 1965, by Weidner and Sells, and *Elementary Modern Physics*, 1960, by Weidner and Sells. Fee, \$5.

\*Physics 208. FUNDAMENTALS OF PHYSICS (U)

Four hours credit. Prerequisites, Physics 207 and at least simultaneous enrollment in Math. 112, or consent of the instructor. Note: Summer students may obtain permission to enroll simultaneously in Physics 207 and 208 by passing a special examination administered by the Cornell Department of Physics on June 26, 1968; those who pass high may be granted advanced placement and 4 hours credit for Physics 207. (Course Physics 208 is not for students who have credit in Physics 102 or 233, or the equivalent.) Lectures, M (Rockefeller A) T W Th F (Rockefeller 103) 8-9:15; seminars and laboratory, M T W Th F 1:30-4:30 (Rockefeller 322-4). Mr. Gross.

A continuation of Physics 207. Dynamics of fluids, acoustic waves, laws of thermodynamics, electromagnetic waves, polarization, diffraction, interference, the wave-particle properties of matter and an introduction to the ideas of quantum mechanics. Fee, \$5.

\*Physics 360. INTRODUCTORY ELECTRONICS (U,G)

Three hours credit. Prerequisites, Physics 208 or 234 (and preferably 310), or consent of the instructor. Lectures and laboratory, M T W Th F 2-5. Clark 309. Mr. Cotts.

Principles of semi-conductor devices, electronic components and circuits, and the operating characteristics of power supplies, amplifiers, oscillators, switching and timing circuits. Knowledge of methods and techniques invaluable to the student who plans experimental work in almost any field involving modern instruments. At the level of *Elementary Electronics* by White. Fee, \$10.

\*Physics 500. INFORMAL GRADUATE LABORATORY (G)

One or two hours credit. Prerequisites, Physics 360 and 436, and consent of the instructor. Laboratory open M T W Th F 2-5, Clark 308. Messrs. Silsbee and Browman.

Topics as in Physics 510, listed in the 8-week session, page 31. Fee, \$5 per credit hour.

(See also Other Programs, page 61.)

## PSYCHOLOGY

Psych. 101. INTRODUCTION TO PSYCHOLOGY: BASIC PROCESSES (U)

Three hours credit. M T W Th F 9:30-10:45. Goldwin Smith D. Mr. Maas.

Emphasizes the study of human behavior from the standpoint of the basic processes, including the following: brain functioning, intelligence, perception, learning, motivation, emotion, personality, abnormal behavior, and psychiatry. The course centers upon contemporary problems confronting psychologists and is supported by special films and guest speakers.

(See also C.D.&F.R. 115, page 48.)

**Psych. 325. ABNORMAL PSYCHOLOGY (U,G)**

Three hours credit. Prerequisite, an introductory course in Psychology or permission of the instructor. M T W Th F 11-12:15. Morrill 340. Mrs. Olum.

An introduction to the study of psychopathology with emphasis on causes. The individual is considered as a unique biological and psychological entity trying to achieve adequate functioning in a particular social milieu. Possibilities of facilitating this process and appropriate types of intervention, as well as research problems in this area, will be considered.

(See also Education 618, page 39.)

**Psych. 381. SOCIAL PSYCHOLOGY (U,G)**

Three hours credit. Prerequisites, 3 hours of Psychology and 3 hours of Sociology. M T W Th F 9:30-10:45. Morrill 340. Mr. Lambert.

Analysis of the history, concepts, methods, and theories used to describe and conceptualize the ways in which people react to one another in social settings and in the laboratory. Students will work individually or as teams on projects, using experimental or other empirical methods. The topics for investigation in lectures and reading will include socialization, attitude change, communication, interpersonal influence, impression formation, leadership, and propaganda.

## SOCIOLOGY

**Soc. 101. MAN AND SOCIETY (U)**

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

An introduction to the principal questions, perspectives, and methods of sociology. The focus of the course 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. 281. THE SOCIAL PSYCHOLOGY OF INTERPERSONAL RELATIONS (U,G)**

Three hours credit. Prerequisite, Sociology 101 or Child Development 115 or their equivalent. M T W Th F 8-9:15. McGraw B-20. Mr. Hayes.

The presentation and development of selected theories offered to account for why people relate to one another the way they do. These perspectives are compared and evaluated in terms of their adequacy in accounting for interpersonal relations. Student participations are solicited via class demonstrations, role play techniques, field studies, and participant observations.

**Soc. 330. POPULATION PROBLEMS (U,G)**

Four hours credit. Prerequisite, Sociology 101 or consent of instructor. M T W Th F 8-9:15. Goldwin Smith 358. Mr. Pool.

The practical and scientific significance of population growth and composition. Fertility, migration, and mortality in relation to social and cultural factors and in relation to questions of population policy. National and international data will receive approximately equal emphasis.

**Soc. 341. SOCIOLOGY OF EDUCATION (U,G)**

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

An examination of educational institutions in the context of contemporary social and cultural developments. The structure of educational institutions,

both American and foreign, and the interrelationships between educational and other institutions will be studied.

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

Four hours credit. Prerequisite, Sociology 101 or consent of instructor. M T W Th F 9:30-10:45. Goldwin Smith 227. Mr. Tavuchis.

The structure and function of the nuclear family, extended family, and corporate kinship groups in the West and cross-culturally. Specific areas which will be examined include biological foundations, mate selection, illegitimacy, sexual controls, internal familial processes, disorganization, the family and stratification, changes in family systems.

**Soc. 354. RELIGION AND WESTERN SOCIETY (U,G)**

Four hours credit. Prerequisites, Sociology 101 or consent of the instructor. M T W Th F 11:00-12:15. 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. 654. SEMINAR: THEORY AND RESEARCH (G)**

Four hours credit. Prerequisite, graduate student status and consent of instructor. M Th 1:30-4:00. McGraw B-20. Mr. Streib.

Social change and the community.

## THEATRE ARTS

**Th. Arts 286. PLAY PRODUCTION (U,G)**

Three hours credit. M T W Th F 9:30-10:45. Lincoln Hall 108. Mr. Robertson.

Principles and standard practice in play production, with emphasis on directional viewpoints and objectives. Special attention to problems of organization, casting, rehearsal techniques, 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 Theatre Arts 285.

**Th. Arts 300. DIRECTED STUDIES. (U,G)**

Credit and hours to be arranged.

**Th. Arts 374. BRECHT AND THE ABSURDISTS: TWO APPROACHES TO MODERN THEATRE (U,G)**

Four 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, Albee, and others will be studied.

**Th. Arts 377. FUNDAMENTALS OF MOTION PICTURE PRODUCTION (U,G)**

Four hours credit. T Th 2-4:40. Lincoln Hall 204. Mr. Beck.

Principles and methods of motion picture production with primary emphasis on creative techniques: script writing, photography, production, editing, special effects, and sound recording. Students will prepare individual films using departmental equipment and laboratories.

## OTHER PROGRAMS OF THE SUMMER SESSION

The following Special Programs are offered during the Summer Session period, June 15 to approximately August 15. Some occur during the period of the eight-week and six-week sessions, June 17 to August 9. 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 eight-week and six-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 eight-week or six-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 six-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 eight-week and six-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 26-AUGUST 9

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, 1968, is offered to enable college-bound students to achieve advanced placement in college.

The program offers college level courses in each of eleven options: Anthropology, Biology, Chemistry, Economics, French, German, Russian, Spanish, Mathematics, Physics and Psychology. In each option the student may earn a minimum of six credit hours 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 \$400 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 16, 1968.

## ADVENTURES IN PHYSICS FOR HIGH-ABILITY SECONDARY-SCHOOL STUDENTS

Supported by the National Science Foundation

JUNE 26–AUGUST 9

This program is designed for students who will have completed their eleventh grade. It provides a superior opportunity in physics, both classroom and laboratory, to supplement the usual offerings in the secondary school. The program is designed –

- (1). To impart to the student some of the exciting adventure of physical science in our present-day culture,
- (2). To facilitate self-evaluation of the student's personal interests in science, and
- (3). To provide a meaningful first exposure to the academic atmosphere of college.

This program will not duplicate or take the place of any conventional college course, but it will supplement the high-school physics experience by a treatment in depth of some fundamental physical concepts and theories, and by independent experimental work in a well equipped laboratory.

For application forms and/or further information, write to Professor L. G. Parratt, Director, Adventures in Physics, Clark Hall, Cornell University, Ithaca, New York 14850.

## AGRICULTURAL EDUCATION SUMMER PROGRAM

JULY 8–AUGUST 2

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. A one-week course in technical agriculture is also available to teachers of agriculture. See listing at end of this report.

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.

Final registration for the three-week session will take place July 8, 1968 at a time and place to be announced.

For further information, address Dr. J. P. Bail, Director, Agricultural Education Summer Program, 209 Stone Hall, Cornell University, Ithaca, New York 14850.

A complete outline of the course offerings follows:

JULY 8–26

\*Agr. Econ. 327u. AGRICULTURAL BUSINESS ORGANIZATION AND MANAGEMENT (U,G)

Two hours credit. Lectures, M T W Th F 8–9:50. Laboratory W 2–4:30. Warren Hall 145.

## 62 OTHER PROGRAMS

An introductory course on how agricultural business activities are organized and managed. Lectures are devoted to a description and analysis of the structure of business activity, external forces affecting business activity, forms of business ownership, financing business operation and managing business firms. Laboratory periods are used to analyze companies within selected industry groups. Fee, \$5.

### \*Agr. Eng. 405u. FUNDAMENTALS OF WELDING (U,G)

Two hours credit. Lectures, M T W Th F 10-11:50. Laboratories T, Th 1-4. Riley-Robb 60 and 64. Mr. Lechner.

Instruction and practice in the fundamentals of electric arc and oxyacetylene welding as they apply to shop work for both repair and construction jobs. Fee, \$5.

### Ed. 532u. METHODS AND MATERIALS OF TEACHING AGRICULTURE (U,G)

Two hours credit. Lectures, M T W Th F 8-9:50. Warren Hall 31. Mr. Berkey.

Consideration is given to an analysis of selected teaching techniques and to the selection, preparation, and use of instructional materials in agriculture.

### Ed. 534u. EDUCATION FOR LEADERSHIP OF YOUTH AND ADULT GROUPS (U,G)

Two hours credit. Lectures, M T W Th F 10-11:50. Warren Hall 31. Mr. Peirce.

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

### Ed. 499u. INFORMAL STUDY IN EDUCATION (U,G)

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

### Ed. 500u. SPECIAL STUDIES IN EDUCATION (G)

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

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

## JULY 29-AUGUST 2

### Consv. 411u. PRINCIPLES OF WILDLIFE MANAGEMENT (U,G)

One hour credit. Lectures and laboratory M T W Th F 8:30-4:30. Arnot Forest. Mr. Caslick.

Fundamental mechanisms of wildlife populations; ecological, social, and economic aspects of wildlife management.

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

## JUNE 26-AUGUST 9

Combinations of courses in the social sciences have been arranged to provide foreign area study programs dealing with China, Latin America, South Asia, Southeast Asia, and Soviet Union. The purpose in each program is to enable



teachers to increase their knowledge as background for modernizing the range and scope of social studies education in the secondary school.

Each study area will require the full time of the student for the 6-week period and provides six hours of graduate level credit. The instructors for each area are authorities in their respective fields.

Approved for 50 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.

The courses in each program are:

## China Program

Hist. 324. HISTORY OF CHINA DURING THE 19TH AND 20TH CENTURIES

*and*

Hist. 490. SEMINAR IN MODERN CHINESE HISTORY

(See pages 47-48.)

## Latin America Program

Hist. 320. LATIN AMERICAN HISTORY SINCE INDEPENDENCE

*and*

Hist. 488. BRAZIL SINCE INDEPENDENCE

(See pages 47-48.)

## South Asia Program

Anthro. 441. CULTURE AND SOCIETY OF SOUTH ASIA

*and*

Anthro. 545. SEMINAR: SOUTH ASIA

(See page 32.)

## Southeast Asia Program

Hist. 496. HISTORY OF SOUTHEAST ASIA AFTER THE FIFTEENTH CENTURY

*and*

Hist. 696. SEMINAR IN SOUTHEAST ASIAN HISTORY

(See page 48.)

## Soviet Union Program

Hist. 463. MODERN RUSSIAN HISTORY FROM THE EARLY 20TH CENTURY TO THE PRESENT

*and*

Hist. 480. SEMINAR IN MODERN RUSSIAN HISTORY

(See page 48.)

## ASIAN LANGUAGE PROGRAM

JUNE 13-AUGUST 23

A program of intensive language instruction in Burmese, Cebuano, Chinese, Indonesian, Japanese, Tagalog, Thai, and Vietnamese. Twenty courses are available during the period of ten weeks in which the student may earn credit within a range of six to twelve hours.

Tuition for the program is \$50 per credit hour. Fees amount to \$5 per week. For further information and application forms, address: Director, Asian Language Program, Franklin Hall, Cornell University, Ithaca, New York 14850.

### Burmese

101-102. Elementary Burmese. Twelve hours credit.

### Cebuano (Bisayan)

101-102. Elementary Cebuano. Twelve hours credit.

### Chinese

101-102. Elementary Chinese (Mandarin). Twelve hours credit.

102b. Elementary Chinese (Mandarin). Six hours credit.\*

201-202. Intermediate Chinese (Mandarin). Eight hours credit.

201b. Intermediate Chinese. Four hours credit.\*

203. Intermediate Chinese. Two hours credit.\*

221H-222H. Elementary Hokkien Chinese. Twelve hours credit.

\*These starred courses are for students who have had some previous study but have not reached the level of the regular 102 course. Course 102b will cover the first five weeks; Courses 201b and 203 are to be taken concurrently during the second five weeks. Placement is by examination.

### Indonesian

101-102. Elementary Indonesian. Twelve hours credit.

201-202. Intermediate Indonesian Reading. Six hours credit.†

203-204. Intermediate Indonesian Composition and Conversation. Six hours Credit.†

†May be taken concurrently for a total of twelve hours credit.

## Japanese

101-102. Elementary Japanese. Twelve hours credit.

201-202. Intermediate Japanese Reading. Six hours credit.‡

203-204. Intermediate Japanese Composition and Conversation. Six hours credit.‡

‡May be taken concurrently for a total of twelve hours credit.

## Tagalog

101-102. Elementary Tagalog. Twelve hours credit.

## Thai

101-102. Elementary Thai. Twelve hours credit.

201-202. Intermediate Thai Reading. Six hours credit.

301-302. Advanced Thai Reading. Eight hours credit.

## Vietnamese

101-102. Elementary Vietnamese. Twelve hours credit.

201-202. Intermediate Vietnamese Reading. Six hours credit.

## Asian Area Courses

Elective Asian Area courses for students in the Language Program include History 324, 490, 496 and 696 in the six-week session program. (See pages 47-48.)

## CITY AND REGIONAL PLANNING AND COMMUNITY DEVELOPMENT INSTITUTE

JUNE 16-JUNE 21

This sixth annual Institute, offered by the Department of City and Regional Planning, is intended to serve the needs of professionals in city and regional planning and related fields such as urban renewal, community and regional development, and institutional planning.

The noncredit courses described below will be offered concurrently. (Additional courses may be offered in the 1968 Institute.)

Tuition and fees for each course: \$175. That sum includes housing in University facilities. A limited number of scholarships will be offered.

For further information and application forms, address: Director of Summer Institute, Department of City and Regional Planning, 106 West Sibley Hall, Cornell University, Ithaca, New York 14850.

#### 1. COLLEGE AND UNIVERSITY PLANNING AND INSTITUTIONAL RESEARCH

Professors Kermit C. Parsons, Thomas W. Mackesey, Thomas R. Mason, and guest lecturers.

Designed to provide an intensive week of study in college and university campus planning that will permit an interchange of approaches between the participants as well as instruction in the methods and techniques of research, analysis, plan preparation, and implementation.

Topics include: statewide planning for higher education, community planning and campus planning, urban renewal and campus development, organization for university planning, institutional research, utilization studies, scheduling and simulation, plan development/facilities programming, the capital budget, and case studies.

#### 2. DATA PROCESSING AND GOVERNMENT INFORMATION SYSTEMS IN PLANNING

Professor Sidney Saltzman and guest lecturers.

A basic introduction to the field designed to provide an opportunity for practitioners to become familiar with data processing applications, equipment and procedures. No prior knowledge or experience is necessary. Design and implementation of application to planning, equipment use, data reduction and analysis, programming case studies.

#### 3. HISTORIC PRESERVATION PROGRAMS

Professor Stephen W. Jacobs and guest lecturers.

An introduction to preservation planning for private citizens, urban planners, and other professionals not only to the means of safeguarding our heritage, but also to the opportunity to use values of a previous time as a resource for planning for the future. In addition to discussions of case studies and the underlying social-psychological basis for preservation, there will be lectures on survey techniques, visual programming, scenic and historic legal controls, private involvement, and the potential of federal and state programs on preservation planning.

#### 4. OPERATIONS RESEARCH IN PLANNING

Mr. John Alderige, Mr. John Hamburg and guest lecturers.

An introductory course intended to provide a general knowledge of the applications of operations research to public systems design processes. Assumes no extensive knowledge of operations research. Topics include models in planning, systems designing theory, analytical methods simulation, forecasting and case reports.

#### 5. RECENT ADVANCES IN THE THEORY OF THE PLANNING PROCESS

Professor Pierre Clavel and Mr. William Goldsmith.

New advances in the theory of planning, planning analysis, the planning process, administrative behavior, and policy making; the importance of these theories to the role of planning and development agencies and their impacts on the private economy, voluntary group participation and the public policy-making process.

Modern theoretical material will be studied and applied to case material from both community planning and regional economic development.

## 6. INTRODUCTION TO URBAN DESIGN

Professor Stuart Stein, Mr. Steven Hurtt, and guest lecturers.

An introduction to the theory, historic precedents, and practice of urban design. The course is organized specifically for people who have no background in design or only a limited exposure to the activities of physical designers. It will deal with the relationships of the designer to the city and regional planner and will be focused on the issues involved in the creation of a suitable physical environment for cities.

## CITY AND REGIONAL PLANNING SUMMER INTERNSHIP PROGRAM

JUNE 27–AUGUST 22

A Summer Internship in the New York metropolitan area in public planning and development and renewal agencies or in planning consultant's offices, combined with lectures and discussions two evenings a week and field trips in the New York area and to other east coast cities. Tuition is \$210 for three hours of credit. Several Richard King Mellon Scholarships are available.

Offered primarily for M.R.P. candidates in the Department of City and Regional Planning but open to others by permission of the Department. For further information address Professor Stuart W. Stein, Department of City and Regional Planning, Sibley Hall, Cornell University, Ithaca, New York 14850.

## CORNELL CONSERVATION WORKSHOP

AUGUST 5–9; AUGUST 12–16

Two, five day sessions 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. A person may attend either session.

Participants are housed in cabins in the 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, write: Dr. Richard B. Fischer, 3 Stone Hall, Cornell University, Ithaca, New York 14850.

## ENGINEERING COOPERATIVE PROGRAM

JUNE 3–SEPTEMBER 7

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 the college or university in which they are enrolled. A schedule of courses to be offered will be available after March 1, 1968.

**CALENDAR.** Courses are scheduled in two separate but consecutive seven-week periods: first period, June 3–July 20; second period, July 22–September 7.

**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 six-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 Session may be arranged for students admitted to the Engineering Cooperative Summer Term.

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

## ENGINEERING SHORT COURSES

(Coordinated by the Office of Continuing Education, Engineering)

Noncredit courses for practicing engineers and scientists who wish to extend or update their knowledge in various technical subjects. Lectures, computation sessions, and laboratory periods. For information and application forms address: Director of Continuing Education, 251 Carpenter Hall, Cornell University, Ithaca, New York 14850.

### 1. STRUCTURE OF PROGRAMMING LANGUAGES

Professor P. Wegner. Fee: \$150. One week: June 4–8.

### 2. ENGINEERING APPLICATIONS OF STATISTICS

Professor H. P. Goode. Fee: \$350. Two weeks: June 11–21.

### 3. TOPICS IN OPERATIONS RESEARCH

Professors R. Bechhofer, R. H. Bernhard, H. Emmons, K. Kortanek, W. L. Maxwell, N. U. Prabhu, H. M. Taylor, L. Weiss. Fee for each session: \$200; for both sessions: \$350. Two one-week sessions:

Session A: Applications of Probability, June 11–15.

Session B: Programming and Applications of Statistical Methods, June 17–21.

### 4. ADVANCED MECHANICAL ANALYSIS

Professor A. H. Burr. Fee for each session: \$200; for both sessions: \$350. Two one-week sessions:

Session A: Friction and Anti-Friction Devices, June 11–15.

Session B: Mechanical Behavior and Advanced Strength of Materials, June 17–21.

### 5. ENGINEERING INTERPRETATION OF AERIAL PHOTOGRAPHS

Professor T. Liang. Fee: \$200. One week: June 11–15.

**6. MATRIX STRUCTURAL ANALYSIS**

Professor R. H. Gallagher. Fee: \$350. Two weeks: June 11-21.

**7. PRINCIPLES OF POLYMER SYSTEMS**

Professor F. Rodriguez. Fee: \$350. Two weeks: June 11-21.

**8. CHEMICAL REACTION KINETICS AND REACTOR DESIGN**

Professor P. Harriott. Fee: \$350. Two weeks: June 11-21.

**9. ELECTRON AND LIGHT MICROSCOPY**

Professor G. Cocks. Fee: \$500. Three weeks: June 4-21.

**10. NATURAL CONVECTION FLOWS AND TRANSPORT**

Professor B. Gebhart. Fee: \$350. Two weeks: June 11-21.

**11. OPTIMIZATION TECHNIQUES AND ENGINEERING APPLICATIONS**

Professor C. Pottle. Fee: \$200. One week: June 17-21.

**12. TECHNICAL COMMUNICATIONS—VERBAL AND WRITTEN**

Mr. M. D. Morris. Fee: \$200. One week: June 17-21.

**13. PLANNING FOR PROFIT IN SMALL INDUSTRY**

Cornell faculty and guest lecturers, under New York State Technical Services Program. Primarily for industries in the Southern Tier Area of New York State. Fee: \$75. Three days: June 18-20.

**14. DYNAMICS OF MECHANICAL SYSTEMS**

Professor R. M. Phelan. Fee: \$350. Two weeks: July 16-26.

**15. LOGICAL DESIGN OF ELECTRONIC SWITCHING SYSTEMS**

Professors N. Bryant and H. C. Torng. Fee: \$350. Two weeks: July 16-26.

**16. CONVENTIONAL AND DIRECT ENERGY CONVERSION**

Professor B. Conta. Fee: \$350. Two weeks: July 16-26.

**17. NEW SEPARATION TECHNIQUES IN CHEMICAL MANUFACTURING**

Professors R. K. Finn and V. Edwards. Fee: \$350. Two weeks: July 16-26.

**18. COMPUTER APPLICATIONS IN SMALL INDUSTRY**

Cornell faculty and guest lecturers, under New York State Technical Services Program. Primarily for industries in the Southern Tier Area of New York State. Fee: \$75. Three days: July 23-25.

**19. FINITE ELEMENT TECHNIQUES IN STRUCTURAL MECHANICS**

Professor R. H. Gallagher. Fee: \$350. Two weeks: August 13-23.

**20. MANAGEMENT OF TECHNICAL PERSONNEL**

Cornell faculty and guests, under New York State Technical Services Program. Primarily for industries in the Southern Tier Area of New York State. Fee: \$100. Four days. August 13-16.

**21. ADVANCES IN PHOTOGRAMMETRY**

Professor A. J. McNair. Fee: \$200. One week: August 19-23.

## UNIT COURSES IN GUIDANCE

Offered by the Department of Education

JULY 1-19

The three courses described below are made available to counselors on a three-week basis in order to provide an opportunity for professional improvement without the need for extended leaves of absence from employment. Credit earned may be applied toward meeting requirements for permanent certification for school guidance positions. For further information, address Dr. A. Gordon Nelson, 215 Stone Hall, Cornell University, Ithaca, New York 14850.

### ILR 451u. DYNAMICS OF OCCUPATIONAL STRUCTURES IN WORK ORGANIZATIONS (G)

Three hours credit. M T W Th F 9-11:30. Field trips to be arranged. Ives 218. Mr. Mesics.

Information about work in modern organizations, the character and distribution of the work force, the role of unions, automation and technology, and the changing character of occupations. The focus is on these areas as they apply to the guidance of noncollege-bound youth. This course may be taken to satisfy in part the requirements for permanent certification in guidance in New York State.

### Ed. 587u. PRACTICUM IN MEASUREMENT AND APPRAISAL FOR COUNSELORS (G)

Two hours credit. M T W Th F 10-11:50. East Roberts 223. 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 a New York State permanent certification requirement for guidance counselors.

### Ed. 588u. CASE STUDIES IN COUNSELING (G)

Two hours credit. M T W Th F 8-9:50. Prerequisites, Ed. 555, Ed. 582, Ed. 583, and Ed. 585, or their equivalents. East Roberts 223. Mr. Feierstein.

An advanced course in counseling in which cases are used for illustrative purposes. Preparation for and conduct of counseling interviews; the making of case studies; referral and other procedures. Required for permanent certification in guidance in New York State.

## HOME ECONOMICS UNIT PROGRAMS

JULY 1-AUGUST 9

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 six-week summer 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 \$50 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. Registration will be completed in the first meeting of the class for each course.

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

## Home Economics Education

H.E.Ed. 533u. TEACHING HOME ECONOMICS AT THE SECONDARY LEVEL (G)

Three hours credit. *July 1-19.* M T W Th F 9-11:30 and additional hours to be arranged. Van Rensselaer East Wing 5. Miss Snell.

Designed for experienced home economics teachers. Consideration will be given to current developments in education and in home economics as they relate to program planning and implementation. Opportunity will be provided for work on individual problems.

## 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. Each course will require participants' full time.

T.&Clo. 276u. TEXTILES (U,G)

Three hours credit. *July 22-August 9.* Prerequisites, a basic course in textiles and an introduction to organic chemistry. Registration limited to twenty students. Lecture, M T W Th F 8-10, Van Rensselaer 213; laboratory M T W Th F 10-12, Van Rensselaer 234. Mrs. Obendorf.

A study of the behavior of textile materials related to their structure and properties and to environmental factors and conditions of service. The laboratory provides an opportunity to explore performance of textiles and methods of evaluation. Students conduct an independent study.

T.&Clo. 490u. SOCIOECONOMIC ASPECTS OF CLOTHING (U,G)

Three hours credit. *July 1-19.* Prerequisites, college courses 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.

## HOME ECONOMICS PROGRAM

### AT NASSAU COMMUNITY COLLEGE

The New York State College of Home Economics will offer five-week courses for lower division credit in Nassau Community College, Nassau County, New York, during the period June 24-July 25.

## 72 OTHER PROGRAMS

Three-week unit courses will be offered on the Nassau Community College campus for upper division and graduate credit at Cornell University, in one or the other of two three-week sessions, July 1-18 or July 22-August 8.

For further information and application forms address: Dr. Carlton E. Wright, 21 Stone Hall, Cornell University, Ithaca, New York 14850.

## HOTEL ADMINISTRATION

JUNE 24 TO AUGUST 9

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 Session 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 the School, and for admission to these courses, address: Dean R. A. Beck, Statler Hall, Cornell University, Ithaca, New York 14850.

## LATIN AMERICAN LANGUAGE AND AREA PROGRAM

The Latin American Language and Area Center, in cooperation with the Institutional Assistance Section of the United States Office of Education, offers a program of intensive language instruction in Portuguese and Quechua. The summer program also includes study opportunities in the literature and culture of the Andes.

(Note that beginning Spanish will be offered in the regular six-week Summer Session; see page 55.)

Financial aid is available to a limited number of graduate or undergraduate students (U.S. citizens) under the National Defense Education Act, Title VI. For further information, fellowship applications, and applications for admission, write: Director, Latin American Studies Program, 205 Rand Hall, Cornell University, Ithaca, New York 14850. Deadline for admissions applications is May 1, 1968.

## Andean Studies

### QUECHUA

101S. ELEMENTARY QUECHUA (U,G) *June 17-August 9*

Eight hours credit. Twenty hours of instruction per week for eight weeks. M T W Th F 8-10 and 11-1. Lincoln 304. Mr. Solá and staff.

An intensive introductory course in the Cuzco dialect of Quechua, emphasizing auditory and speaking skills.

## ROMANCE STUDIES

Spanish 497. SOCIOLOGICAL IMPLICATIONS OF THE NOVELA INDIANISTA (U,G) *June 17-August 9*

Three hours credit, or two hours for students coregistered in Quechua 101S. M T W Th F 2:00-3:00. Lincoln 304. Mr. Arguedas.

Lectures in Spanish by Dr. José María Arguedas, distinguished Peruvian novelist, on Spanish-American authors concerned with Indian problems.

## ANTHROPOLOGY

Professor of Anthropology John V. Murra, specialist in Andean Ethnology, will be in residence.

## Portuguese

101. ELEMENTARY PORTUGUESE (U,G) *June 17-August 23*

Six hours credit. Must be taken with Port. 102. M T W Th F 9-12 and 2-3. Morrill 201. Miss Michtom and staff.

102. ELEMENTARY PORTUGUESE (U,G) *June 17-August 23*

Six hours credit. Must be taken with Port. 101. M T W Th F 9-12 and 2-3. Morrill 201. Miss Michtom and staff.

Portuguese 101 and 102 constitute twenty hours of instruction per week for ten weeks.

203. COMPOSITION AND CONVERSATION (U,G) *June 17-August 9*

Three hours credit. Prerequisite, qualification in Portuguese and simultaneous enrollment in Port. 204. M T W Th F 9-12 and M W F 2-3. Morrill 202. Mr. Eastlack and staff.

204. COMPOSITION AND CONVERSATION (U,G) *June 17-August 9*

Three hours credit. Prerequisite, must be taken with Port. 203. Class schedule the same as for Port. 203. Mr. Eastlack and staff.

Portuguese 203 and 204 constitute eighteen hours of instruction per week for eight weeks.

## MARINE BIOLOGY FIELD COURSE

### JUNE 8-22

The marine biology field course is designed as a broad introduction to marine biology and biological oceanography for those who have an interest in marine sciences but have not yet had the opportunity for study directly in the marine environment. It also allows the student who has studied a particular marine subject (such as invertebrate zoology) at an inland location to obtain the deeper familiarity with the subject that is made possible by readily available living material in its natural habitat. The course is presented, through the facilities of the Star Island Corporation, at the Isles of Shoals, ten miles out in the Atlantic, off Portsmouth, N.H. These small, granite islands surrounded by unpolluted ocean water provide a uniquely rich and totally accessible flora and fauna.

## 74 OTHER PROGRAMS

Enrollment in this program is limited to thirty students. Expenses will total \$215, which covers tuition, fees, board, room, health insurance, and boat transportation for the two-week period, and is payable in advance. A limited amount of financial aid 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. Sci. 374u. FIELD MARINE BIOLOGY (U,G)

Two hours credit. *June 8 to 22.* Prerequisite, at least a full year of college biology. Daily lectures, laboratory, and field work. Miss Bush, Mr. Anderson (invertebrate zoology); Mr. Barlow (marine ecology, oceanography); Mr. Gilbert (elasmobranchs, marine mammals); Mr. Murray (marine birds); Mr. Raney (marine fish); Mr. Kingsbury (marine algae), in charge; supplemented by guest lecturers.

## SHELL MERIT FELLOWSHIP PROGRAM

### JULY 1 TO AUGUST 9

For well prepared and successful teachers of biology, earth science, general science, chemistry, and physics, and a few selected supervisors of these subjects.

Address inquiries to Shell Merit Programs, 320 Wait Avenue, Cornell University, Ithaca, New York 14850.

## SIX-YEAR Ph.D. PROGRAM

### JUNE 26-AUGUST 9

Limited to students who will join the class of 1971 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 the experience of small seminars, and to develop reading knowledge of essential languages. Elementary and advanced instruction will be offered in French, German, and Russian. A seminar in science, one in humanities, and one in the social sciences will also be offered. Each student in the program will enroll in one seminar and one language course.

## SUMMER STUDIOS IN ART

### Unit-courses in Painting, Sculpture, and Graphic Arts

### JULY 1-AUGUST 9

This program is planned for persons who wish to concentrate exclusively in art, taking intensive courses in the practice of art with a faculty of prominent contemporary artists in the pleasant environment of the Finger Lakes area

of upstate New York. Cornell University maintains in this setting a summer program of lectures, music, drama, and exhibitions usually available only in large metropolitan centers.

Courses in the three arts are offered in each of three two-week periods, July 1-12; July 15-26; and July 29-August 9. A student may attend one, two, or three periods and earn a total of two to six hours of credit. Two credit hours may be earned in any one period in either painting, sculpture, or graphic arts, or in any two of the three arts for an hour of credit in each.

The instruction will be adapted to students of all levels of experience and will involve individual assignments and criticism with ample opportunity for studio participation.

For additional information and an application form, address: Director, Summer Studios in Art, Franklin Hall, Cornell University, Ithaca, New York 14850.

# UNIVERSITY ADMINISTRATION

James A. Perkins, President of the University.  
Dale R. Corson, University Provost.  
Mark Barlow, Jr., Vice President for Student Affairs.  
John E. Burton, Vice President-Business.  
Lewis H. Durland, University Treasurer.  
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Steven Muller, Vice President for Public Affairs.  
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Robert L. Sproull, Vice President for Academic Affairs.  
Neal R. Stamp, Secretary of the Corporation, and University Counsel.

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Archie R. Ammons, B.S., Assistant Professor of English.  
Howard G. Andrus, Ph.D., Professor of Education.  
José María Arguedas, DLitt., Visiting Professor of Spanish-American Literature, University of San Marcos, Lima, Perú.  
Charlotte W. Baumgartner, Ph.D., Professor and Head of Department of Textiles and Clothing.  
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David G. Cassel, Assistant Professor of Physics.  
O. Edmund Clubb, M.A., Foreign Service Officer, ret. (Director, Office of Chinese Affairs, Department of State.)  
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Roberts M. Cotts, Ph.D., Associate Professor of Physics.  
Charles L. Eastlack, Ph.D., Assistant Professor of Linguistics.  
Donald A. Edwards, Ph.D., Associate Professor of Physics.  
Joan R. Egner, Ed.D., Assistant Professor of Education.  
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- Martin M. Gazourian, Instructor in Electrical Engineering.  
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 Jean Parrish, Ph.D., Associate Professor and Chairman of Romance Studies.  
 Donald R. M. Paterson, M.M., Assistant Professor of Music and University Organist.  
 Walter J. Pauk, Ph.D., Professor of Education and Director of Reading and Study Center.  
 Isabel J. Peard, Ph.D., Professor of Education.  
 Harry E. Peirce, B.S., Graduate Assistant in Education.  
 D. I. Pool, Ph.D., Assistant Professor of Sociology, University of Western Ontario, Ontario, Canada.

## 78 FACULTY

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- Ronald Simpson, B.S., Research Associate in Material Science and Engineering.
- G. Warren Smith, Ph.D., Assistant Professor of Chemistry.
- Thomas A. Sokol, M.A., Associate Professor of Music and Director, Choral Activities.
- Donald F. Solá, Ph.D., Associate Professor of Linguistics, and Director of Quechua Language Program.
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- Kenneth G. Wilson, Ph.D., Associate Professor of Physics.
- David Wyatt, Ph.D., Assistant Professor of History, University of London, London, England.
- Joan R. Yanuzzi, Ph.D., Professor of Education and Guidance, Sayre Area Schools, Sayre, Pennsylvania.



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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 *Announcement of General Information*; after consulting that, he may wish to write for one or more of the following *Announcements*:

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

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

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

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

(The writer should include his zip code.)



FOR UNDERGRADUATE STUDENTS ONLY  
 CORNELL UNIVERSITY SUMMER SESSION, 1968

APPLICATION FOR ADMISSION AND COURSE PROGRAM

Applying for (check one): ☐ 8-week session. ☐ 6-week session.  
 Application due: By June 10. By June 21.

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

Present  
 Mailing Address .....  
 (Street and No.)

.....  
 (City) (State) (Zip Code)

Home  
 Address .....  
 (Street and No.)

.....  
 (City) (State) (Zip Code)

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.*

PREADMISSION TO COURSES

Students who can devote full time to study are expected to enroll for four or more hours in the eight-week session or three or more hours in the six-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. Abbrev. No.	Course Title	Credit Hours	Meeting Time
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Leave the following spaces blank.

Received	Recorded	Sent
.....	.....	.....

—OVER—

Please include the zip code in your address.

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, 1968*.

FOR STUDENTS ADMITTED TO CORNELL UNIVERSITY ONLY

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 9 of the *Announcement of the Summer Session*).

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 eight-week session; June 21 for the six-week session.



# FOR GRADUATE AND SPECIAL STUDENTS ONLY

## CORNELL UNIVERSITY SUMMER SESSION, 1968

### APPLICATION FOR ADMISSION AND COURSE PROGRAM

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) (Zip Code)

State country of citizenship (if other than U. S.) .....

### PREADMISSION TO COURSES

The courses listed below must be chosen from the *Announcement of the Summer Session, 1968*. 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. No.	Course Title	Credit Hours	Meeting Time
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Mail this application to the Director of the Summer Session, B-20 Ives Hall, Cornell University, Ithaca, New York, 14850 by June 15 to assure place in the classes.

Leave the following spaces blank.

Received	Recorded	Sent

—OVER—

Please include the zip code in your address.

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)