

THE COLLEGE OF ARCHITECTURE



Architecture
Landscape Architecture
Painting & Sculpture
and courses in
Regional and City
Planning

1940-41

CORNELL UNIVERSITY OFFICIAL PUBLICATION
VOLUME 31 : DECEMBER 1, 1939 : NUMBER 8

The University Calendar for 1940-41

1940		FIRST TERM
Sept.	16, <i>Monday</i> ,	Entrance examinations begin.
Sept.	23, <i>Monday</i> ,	Registration and assignment, new students.
Sept.	24, <i>Tuesday</i> ,	Registration and assignment, old students.
Sept.	26, <i>Thursday</i> ,	Instruction begins at 8 A.M.
Oct.	17, <i>Thursday</i> ,	Last day for the payment of tuition for the first term.
Nov.	20, <i>Wednesday</i> ,	Instruction suspended at 4 P.M. (<i>Thanksgiving Recess</i>)
Nov.	25, <i>Monday</i> ,	Instruction resumed at 8 A.M.
Dec.	21, <i>Saturday</i> ,	Instruction suspended at 12:50 P.M.
1941		(<i>Christmas Recess</i>)
Jan.	6, <i>Monday</i> ,	Instruction resumed at 8 A.M.
Jan.	11, <i>Saturday</i> ,	Founder's Day
Jan.	27, <i>Monday</i> ,	Final examinations begin.
Feb.	5, <i>Wednesday</i> ,	Final examinations end.
Feb.	6, <i>Thursday</i> ,	A holiday.
SECOND TERM		
Feb.	7, <i>Friday</i> ,	Registration of all students.
Feb.	10, <i>Monday</i> ,	Instruction begins at 8 A.M.
March	3, <i>Monday</i> ,	Last day for the payment of tuition for the second term.
March	29, <i>Saturday</i> ,	Instruction suspended at 12:50 P.M. (<i>Spring Recess</i>)
April	7, <i>Monday</i> ,	Instruction resumed at 8 A.M.
May	—, <i>Saturday</i> ,	Spring Day: a holiday.
June	2, <i>Monday</i> ,	Final examinations begin.
June	10, <i>Tuesday</i> ,	Final examinations end.
June	16, <i>Monday</i> ,	COMMENCEMENT.

CORNELL UNIVERSITY OFFICIAL PUBLICATION

PUBLISHED BY CORNELL UNIVERSITY AT ITHACA, N. Y.

Monthly in September, October, and November

Semi-monthly, December to August inclusive

[Entered as second-class matter, December 14, 1916, at the post office at Ithaca, New York, under the act of August 24, 1912]

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The Faculty of the College of Architecture

- EDMUND EZRA DAY, S.B., A.M., Ph.D., LL.D., President of the University.
- GILMORE D. CLARKE, B.S., A.I.A. (Hon.), A.S.C.E., F.A.S.L.A., Dean and Professor of Regional Planning.
- JOHN NEAL TILTON, JR., M.Arch., A.I.A., Assistant Dean and Professor of Architecture.
- CLARENCE AUGUSTINE MARTIN, D.Sc., F.A.I.A., Professor of Architecture, Emeritus.
- OLAF MARTINIUS BRAUNER, Professor of Drawing and Painting, Emeritus.
- GEORGE YOUNG, JR., F.A.I.A., Professor of Architecture.
- FRANCKE HUNTINGTON BOSWORTH, A.B., F.A.I.A., Andrew Dickson White Professor of Architecture. (On leave of absence.)
- CHRISTIAN MIDJO, Professor of Fine Arts.
- RALPH WRIGHT CURTIS, B.S.A., M.S.A., Professor of Ornamental Horticulture.
- LEROY P. BURNHAM, M.S.Arch., A.I.A., Professor of Architecture.
- ALEXANDER DUNCAN SEYMOUR, B.S.Arch., A.I.A., Professor of Architecture.
- EUGENE DAVIS MONTILLON, B.Arch., F.A.S.L.A., A.I.A., Professor of Landscape Architecture.
- DONALD LORD FINLAYSON, M.A., Professor of Fine Arts.
- HUBERT E. BAXTER, B.Arch., Professor of Architecture.
- ERIC GUGLER, B.Arch., F.A.I.A., Associate Professor of Architecture.
- WALTER KING STONE, Assistant Professor of Fine Arts.
- EDWARD LAWSON, B.S., M.L.D., F.A.A.R., F.A.S.L.A., Assistant Professor of Landscape Architecture.
- WILLIAM McLEISH DUNBAR, B.Arch., A.I.A., Assistant Professor of Architecture. (On leave of absence.)
- JOHN A. HARTELL, B.Arch., Assistant Professor of Architecture. In charge of instruction in Fine Arts.
- KENNETH L. WASHBURN, M.F.A., Assistant Professor of Fine Arts.
- FREDERICK O. WAAGÉ, A.M., M.F.A., Assistant Professor of the History of Art and Archaeology.
- JAMES O. MAHONEY, A. B., F. F. A., F. A. A. R., Assistant Professor of Fine Arts.
- THOMAS W. MACKESEY, B.Arch., M.C.P., Instructor in Regional Planning and Secretary of the Faculty.
- PAUL ATKINS UNDERWOOD, M.F.A., Instructor in the History of Art.
- A. HENRY DETWEILER, B.Arch., Instructor in Architecture.
- HARRISON GIBBS, F.A.A.R., Instructor in Fine Arts.
- JOHN T. UDALL, B.Arch., Instructor in Architecture.

The College of Architecture

DEVELOPED AT CORNELL AS A
UNIT OF THE UNIVERSITY

AT CORNELL from the first there was a place in the university system for a school of Architecture. Although it owes its foundation to the Federal and State governments and Ezra Cornell, this University derives its distinctive character primarily from the ideas of Andrew Dickson White, one of its sponsors who became its first president. The initial plan of organization, which the trustees adopted at their first meeting in 1865, was White's plan. It called for the setting up of certain essential departments of instruction, one of which was to be Architecture. That was something bold and new, to recognize a means of higher education in that sort of training.

A modest department of Architecture was established in 1871, three years after the University was opened. It was fortunate to have President White himself for a patron. He had cultivated an intelligent interest in architecture from boyhood, as he records in his autobiography, and during journeys abroad his 'pet extravagance' had been the collection of books and other material relating to it. He gave the new department all that had accumulated—a large architectural library and several thousand architectural photographs, drawings, casts, models, and other items of material from all parts of Europe—a collection then almost if not quite unique. His gift formed the nucleus of an increasingly useful library and store of illustrative equipment.

In the course of time, as the University perfected its organization, the department became the College of Architecture, having grown to a respectable size and given other evidence of maturity. In 1922 it took under its charge a well developed course in Landscape Architecture, adopting a department which the College of Agriculture at Cornell had been rearing since 1904. This union has proved to be invigorating, for it has been made to enrich the instruction in Architecture and Landscape Architecture alike. A department of Painting and Sculpture, organized in 1921, has had a similar effect, demonstrating the mutual value of correlated instruction in kindred arts. A university department, Regional and City Planning, subsidized by the Carnegie Corporation, was made a part of the College of Architecture in 1935. As long ago as 1922 the college set a limit to the number of its students and devised a selective method of admission. It now has

a faculty of twenty and enrolls about 130 students. Teachers and students in such a proportion can mix together freely and the instruction and criticism can be made quite individual.

While the College of Architecture is distinctively a professional school aiming at professional competence it can not afford to forget that it is a unit in a system of education and that its professional graduates are the better for being educated persons. That conviction may be reflected to some extent in the catalogue of courses, but not all of its effects can be catalogued. It is implicit in the teaching. It accounts for the credit to be earned by elective studies and for this college's organic articulation with various other university divisions. The candidate for any of the professional degrees normally does much of his work under professors of other arts and sciences. In his leisure time he can find means of acquaintance with any of the diverse human interests that occupy the members of a university.

THE PROFESSIONAL COURSES

REQUIREMENTS FOR THE DEGREES

The student's work is planned to lead to one of three professional degrees: in Architecture to the degree of Bachelor of Architecture (B.Arch.), in Landscape Architecture to that of Bachelor of Landscape Architecture (B.L.A.), and in Painting and Sculpture to that of Bachelor of Fine Arts (B.F.A.). Typical courses of study are described and analyzed on pages 18-23.

It is inadvisable for anyone not vitally interested to attempt the work of any of these courses of study. The normal period of each of them is five years, although a student with exceptionally thorough preparation can satisfy the requirements for the degree in somewhat less time. Some students who have entered the college after taking an A.B. degree have earned the professional degree in as little time as three and one-half years. About three-tenths of the average entering class have had some college experience. In no case, however, can the rate of a beginner's progress be predicted, because that will depend in large part upon the quality of his work, not alone upon the quantity of it. In any term the number of hours of work that the student is permitted to carry is determined by the grade of what he has already done. For that reason the length of time required for the completion of the course will depend in any case upon the student's ability as indicated by his scholastic record. Any crowding of the student's work, however, is disapproved because the time-element alone is important in the training for a creative profession.

ELECTIVE

STUDIES As a general rule the first year of each professional course is designed to lay the foundation for the major subjects of the technical program and incidentally to permit the first-year student to test his fitness to go on with that program. Throughout the remaining four years opportunities for elective studies are offered in such a sequence that increasing maturity of mind may enable the student to make the most profitable use of them. In each of these professional courses of study about one-fifth of the work leading to the degree is elective, consisting of studies to be chosen by the student himself, with the advice and approval of members of the Faculty, from the offerings of any college of the University. Such studies are intended to be liberally educational, developing some native intellectual faculty or interest quite outside the range of the professional course. A minor part of the time allotted to electives may, however, be used for intensive study in some one division of the professional requirement in which a student may prove to be either especially interested and competent or somewhat deficient.

COURSES OF STUDY

CORRELATED Since the professions of architecture and landscape architecture are fundamentally similar, the corresponding professional courses of study are intimately correlated. Much of the instruction, including all that of the first year, is the same in both. The work in design is the same for three terms. Later on certain problems in design are given jointly. From time to time there will be a problem of design requiring the formal collaboration of architect and landscape architect and occasionally of painter and sculptor as well. Even more profitable than the interlocking of the courses in Architecture and Landscape Architecture is the daily intermingling of their students, working as they do side by side in the drafting room, often under the same instruction, and with the professors of each department constantly in touch with the students of the other. Incidentally, the courses of study are so much alike in the earlier years and both are so flexible that a student can make a timely change of course if maturing taste and aptitude incline him that way.

FACULTY

ADVISERS A faculty adviser is assigned to every student of the college. During the student's first year his adviser is the Dean or the Assistant Dean. In the first term of the second year the student is put under the direction of some other member of the Faculty, who

serves as his adviser for the rest of his course (except as noted below under the head of Select Fields of Study, page 17). The student is required to consult with his adviser in scheduling courses, particularly those of his elective program, and to obtain his adviser's signature on each term's study-card. The study-card, listing the courses selected for the term, is to be made out, approved by the adviser, and filed in the Dean's office before the last month of the preceding term.

INFORMAL

STUDIES Under certain conditions a qualified student may expedite his progress by pursuing an Informal Study Course, in which he will be permitted to make some departure from the prescribed course of study for the sake of doing more intensive work in one or another section of it. This privilege may be accorded by the Committee on Admissions to a student who is entering the college with a considerable amount of advanced credit. The Faculty may grant it to a student who has done especially meritorious work in the college and who asks for it by formal petition bearing his faculty adviser's approval. The student admitted to such a course will do his work under his adviser's supervision and the Faculty will grant him periodical credit commensurate with his progress.

SELECT FIELDS

OF STUDY A candidate for any of the degrees that the college offers may, if found to be qualified, enter upon a Select Field of Study for the period of his fourth and fifth years. (See page 17 for a list of those fields and a statement of the conditions of entrance, and page 18 for typical outlines of three such fields.)

THESIS

The satisfactory completion of a Thesis is required of every candidate for the bachelor's or master's degree in the College of Architecture. The thesis must be completed during the last term of residence. It must consist of an independent study, the subject of which has been selected by the student with the Faculty's approval. The thesis is expected to demonstrate the student's all-round proficiency in his particular field of study.

PLANNING AND

HOUSING The department of Regional and City Planning offers courses of instruction in the principles and practice of broad-scale Planning and of Housing. These courses may

be elected by students of the College of Architecture and of the College of Engineering and by qualified students of other divisions of the University. (Further information about them is given on page 24.)

ENTRANCE REQUIREMENTS

ADMISSION TO THE COLLEGE The entrance requirements of the College of Architecture are to be found in the University's *General Information Number*. The University's rules governing admission to any of its colleges are also given there. Prospective students should address the Director of Admissions, Cornell University, Ithaca, N. Y., asking for forms to be used in making application for admission. Applications for admission in September should be received by June 1. For admission in February candidates should apply by January 1. Most classes, particularly those of the first year, are on a yearly basis and it is difficult to arrange satisfactory schedules for beginners at midyear.

**ADMISSION TO
ADVANCED STANDING** A student who has already attended a technical school or other institution of collegiate rank may be admitted at the beginning of the first term or, if a satisfactory schedule can be arranged, at the beginning of the second term. The applicant is required to meet all entrance requirements and to comply with the rules governing admission. In addition he should file with the Director of Admissions an official transcript of record of his work at the institution already attended, together with a certificate of honorable dismissal therefrom. He should also send a catalogue of that institution, writing his name thereon, and marking the courses which he has taken as listed in the official transcript. Advanced credit for courses in the College of Architecture is given only upon examination by the department concerned. A preliminary ruling will, however, be made by the Committee on Admissions on the evidence submitted.

**ADMISSION AS A
SPECIAL STUDENT** As a rule the special student is one who has had advanced experience in professional practice but who can not meet the requirements for admission as a candidate for a degree. In any case such a student must be at least twenty-one years of age.

A special student in Architecture or Landscape Architecture must have had a high school training or its equivalent, including a work-

ing knowledge of plane and solid geometry and of algebra through quadratic equations. He should have had at least three years of practical experience or its equivalent and should submit with his application examples of his draftsmanship and credentials from employers or others acquainted with his work.

Special students in Fine Arts are admitted only on evidence of ability in drawing, painting, or modeling of such outstanding quality as to set a standard for the regular students. Each application will be considered on its merits, but the applicant must present evidence to show, first, qualifications and proved ability to do advanced work in some branch of the fine arts; and, second, general academic training preferably equivalent to graduation from an institution of collegiate rank, but in no case less than the equivalent of graduation from an approved high school. If admitted on the lesser requirement the student will be expected to take, in addition to drawing, painting, etc., such general work as the Faculty may prescribe.

A special student may be admitted at the beginning of either term. The application should be filed by June 1 or by January 1. In all cases admission is subject to the University's general rules governing admission, which are to be read in the *General Information Number*. A special student is expected to maintain a high level of excellence and if he falls below it he may not continue to be enrolled. The college does not award a certificate for special work.

GRADUATE

STUDY The Graduate School of Cornell University offers the degrees of Master of Architecture (M.Arch.), Master of Landscape Architecture (M.L.A.), and Master of Fine Arts (M.F.A.). Work in the field of Regional and City Planning is acceptable as a major subject of graduate study leading to the degree of Master of Architecture or of Master of Landscape Architecture.

The requirements for advanced degrees are based, not upon hours of credit earned in courses of instruction, but upon the completion of a definite period of residence, the presentation of a satisfactory thesis, and the passing of an examination. The graduate student's work is expected to be independent and original.

In order to be admitted to candidacy for any of the degrees named, an applicant must be qualified under the Graduate School's general rules of admission (to be found in the *Announcement of the Graduate School*) and must have had a training at least equivalent in quantity or quality to that which this University requires of candidates for the baccalaureate degree specializing in the undergraduate course that

corresponds to the kind of study—historical, theoretical, or creative—which the applicant proposes to pursue. The applicant's credentials and his plan of study must be submitted to the executive committee of the Graduate School's Division of Architecture and Fine Arts and admission is subject to that Committee's approval.

SUMMER

SESSION The University conducts an annual Summer Session of six weeks, beginning about July 5. The instruction includes courses in Drawing and Painting every year. It includes courses in Advanced Architectural and Landscape Design. (Not given in 1940.)

EQUIPMENT

BUILDINGS The college occupies the third and fourth floors and a portion of the basement of White Hall, the top floor of Franklin Hall, and a part of Morse Hall. The college offices, library, lecture room, and exhibition rooms are on the third floor of White Hall. Three drafting rooms, opening together so as to form virtually a single room measuring 45 x 156 feet, occupy the entire fourth floor. On the top floor of Franklin Hall and in Morse Hall are well lighted studios devoted to the work in freehand drawing, painting, and modeling.

LIBRARIES

The college's library comprises more than 8,000 volumes. It is adapted to use as a working collection and to the requirements of research. All the leading professional periodicals, American and foreign, are currently received and are preserved in bound volumes. There is also at hand a highly developed collection of photographs, color prints, and drawings, and a growing collection of lantern slides, many of them in color, which now numbers more than 30,000. The University Library, the special libraries of various departments, and a 'browsing library' for recreational reading in Willard Straight Hall, the University's community center, are available to students.

EXHIBITIONS

An art gallery is maintained in Willard Straight Hall, primarily for loan exhibitions of paintings, etchings, and sketches by eminent contemporary artists. The work of students is currently shown in the exhibition rooms of White Hall.

UNIVERSITY

PRIVILEGES The student of the College of Architecture is entitled to the use of all the University's general facilities and privileges. He may elect courses of study in any of the University's colleges. All the usual extra-curricular activities ordinarily to be found at a university are practiced at Cornell and are open to all students. They include musical and dramatic clubs, undergraduate publications, religious, social, and professional organizations, and a great variety of athletic sports both intramural and intercollegiate.

LECTURES

University endowments provide numerous public lectures in the course of every year, given by visiting scholars, scientists, and public men, both American and foreign. All such lectures are free to members of the University community.

THE STUDENT'S HEALTH

The University's staff includes a medical adviser of men and a medical adviser of women, each of whom has a corps of professional assistants. They keep regular office hours at their respective offices. Their duties include the periodical medical examination of all students. Their advice is given freely to any student at any time.

The University Infirmary is situated near the campus. In return for the payment of the infirmary fee any student, in case of illness, is admitted to the Infirmary and is entitled to receive care and nursing within certain limits which are defined in the *General Information Number*.

TUITION

AND FEES Information concerning tuition, fees, living conditions, residential halls, means of self-help, etc., is given in the *General Information Number*. That publication gives various other items of information applicable to all students, and it should be read in connection with this Announcement.

FELLOWSHIPS AND

SCHOLARSHIPS *Nine First-Year Tuition Scholarships* may be awarded to students registered for their first year in the College of Architecture. They pay one-half of the first year's tuition. They are awarded primarily on the basis of financial

need. In the discretion of the college and the President of the University the holder of one of these first-year scholarships may be awarded the same aid in his second year provided the number of the scholarships does not at any time exceed nine.

Three Scholarships may be awarded annually to graduates of four-year schools, with any baccalaureate degree, who are not eligible for admission to the Graduate School. They pay \$300 each toward one year's tuition of \$400.

Fellowships of the American Academy in Rome are offered annually in Architecture, Landscape Architecture, Painting, and Sculpture, for award respectively to the winners of special competitions. They afford the fellows a residence of two years at the American Academy in Rome and the means of European travel. The yearly stipend amounts to two thousand dollars. Graduates of this college are eligible to compete for these fellowships.

The Robert James Eidlitz Fellowship, a graduate fellowship in Architecture valued at approximately \$1200, provides for exceptionally promising students who could not otherwise afford it an opportunity to supplement, in such ways and in such places as may be best suited to their individual needs, the professional training which they have received in the College of Architecture.

The Shreve, Lamb and Harmon Professional Fellowship may be awarded annually by the Faculty of the College to a superior student on his completion of the requirements for graduation with the degree of Bachelor of Architecture. Its purpose is to provide better than usual conditions under which a young architect may make the transition from school work to practice. The holder of this fellowship becomes a member of the staff of Shreve, Lamb & Harmon, architects of New York City, for the term of one year or as may be otherwise arranged. During that year such work will be given him as is calculated to advance his special ability, aptitude, or interest, and he will be encouraged to study the office work as he did his school work. He will receive salary enough to enable him to live decently and comfortably in or near New York.

A University Fellowship of \$400 with free tuition may be awarded annually for graduate study in Architecture, Landscape Architecture, or the Fine Arts.

Three Graduate Scholarships giving free tuition in the Graduate School may be awarded annually for graduate study in Architecture, Landscape Architecture, or the Fine Arts.

Tuition Scholarships. For students of the Graduate School there are provided thirty tuition scholarships. They entitle the holder to ex-

emption from the payment of tuition fees, but not other fees, for the duration of the appointment. Application should be made to the professor or professors under whose supervision the applicant is working, or to the office of the Graduate School. Awards are made in May of each year.

The Phi Kappa Phi Scholarship, established by the Cornell chapter of the society of Phi Kappa Phi, is open to graduate students in any field of study. Preference is given to members of the society. The scholarship carries free tuition in the Graduate School and a stipend of \$150. Applications for this scholarship should be filed in the office of the Graduate School not later than March 1.

For information concerning other scholarships that are open to students of this college in common with other students of the University, consult the *General Information Number*.

MEDALS AND

PRIZES *The Charles Goodwin Sands Memorial Medal*, founded in 1900 by the family of Charles Goodwin Sands of

the Class of 1890, is awarded for work of exceptional merit in any of the advanced courses in the College of Architecture. Two grades of medal are recognized, the silver and the bronze.

A medal may be awarded to a student registered in the Graduate School doing the major part of his work in the College of Architecture.

Medals are not awarded for work done in collaboration.

The Clifton Beckwith Brown Memorial Medal was established in 1901 by John Harkness Brown in memory of his brother, Clifton Beckwith Brown of the Class of 1900, who was killed on the field of battle at San Juan Hill. A silver or bronze replica is awarded by the Faculty to that member of the graduating class who has attained the highest standing in Courses 113 and 114, or 151 and 152. The award is withheld if the standard is not considerably higher than that required for graduation.

The Student Medal of the American Institute of Architects is awarded to the member of the graduating class in architecture who has maintained the best record throughout the entire course.

Award for Excellence in Design, given by Central New York Chapter, A.I.A.

Beaux-Arts Institute of Design. Prizes are offered through the Beaux-Arts Institute of Design for excellence of work in design. These prizes are open to students of the College of Architecture.

The Fuertes Memorial Prizes in Public Speaking, founded in 1912 by Charles H. Baker, a graduate of the School of Civil Engineering of the Class of 1886, are offered annually to members of the Junior and Senior classes in the Colleges of Engineering and Architecture for excellence in public speaking. There are three prizes of \$80, \$40, and \$20 respectively.

The Paul Dickinson Prize, established in 1927 by Miss Dorothea C. Dickinson of the Class of 1923 in memory of her father, is awarded to the student in the first-year class of the College of Architecture who has attained the highest record. This prize is not awarded unless the record is well above the average of first-year work in the college.

The Baird Prizes, one of \$25 and one of \$15, are awarded as first and second prizes in a special sketch problem competition in Advanced Design. The problem, lasting six days, is given during the early part of the second term and is of a decorative nature. Established in 1927, the gift of Mrs. M. Z. Baird, the income (or, in the discretion of the Faculty of the College of Architecture, the principal) is to be used for the purposes of this college; it was designated as a prize fund by the Faculty in 1927.

The Edward Palmer York Memorial Prizes, one of \$25 and one of \$15, are awarded as first and second prizes in a special competition for students in Intermediate Design, Course 111 and Courses 150a and 150b. The problem, lasting approximately one week, is given in the second term.

The Gargoyle Prize of \$10, offered annually by the Gargoyle honorary architectural society, is awarded to the undergraduate member of this college who exhibits at the Summer Sketch Exhibit held in October the best group of sketches or measured drawings, in any medium, made during the previous summer. Sketches and drawings submitted in this exhibition should be left with the college librarian during September registration.

The Robinson Prize, established in 1936 by C. D. Robinson, jr., of the Class of 1930, and amounting to \$25, may be awarded annually for superior advanced work in the History of Architecture.

The New York Society of Architects Medal and Certificate is awarded annually for excellence in construction to that senior student who, in the opinion of this Faculty and the society's committee, is the leader of his class in construction as applied to architecture.

Alpha Alpha Gamma offers a prize of \$10 for the best group of photographs taken during the summer by a student of the college.

WINNERS OF

AWARDS Fellowships, Scholarships, Medals, and Prizes were awarded during the year 1939-40 as follows:

Robert James Eidlitz Fellowship: John D. Anderson (travel in U. S., Mexico, and Central America).

University Fellowship: William Edward Ricker, B.Arch. (Ohio State).

Graduate Scholarship: Elmer J. Manson, B.Arch. (Cornell).

\$300 Scholarships: Robert S. McCoy, A.B. (Dartmouth); Robert S. Svoboda, B.S.Arch. Eng. (V.P.I.); William E. Brackett, jr., B.S.Arch. (Clemson).

First Year Scholarships: Roger O. Austin, James P. Beardsley, Jules Gregory, C. Freeman Howe, Douglas H. Logan, George C. Rankin, Mrs. Dorthea A. Thurston, William A. Wise.

Fellowship in Landscape Architecture of the American Academy in Rome: Frederick W. Edmondson, jr.

Shreve, Lamb and Harmon Professional Fellowship: James C. Freer, C. Frederick Wise.

Charles Goodwin Sands Memorial Medal (Silver): Frederick W. Edmondson, jr.

Charles Goodwin Sands Memorial Medal (Bronze): John E. Gaston, Theodore Q. Hoffman.

Clifton Beckwith Brown Memorial Medal (Bronze): Olaf H. Dahlstrand.

Student Medal of the American Institute of Architects: First Award: Theodore Q. Hoffman; Second Award: Olaf H. Dahlstrand.

Award for Excellence in Design by Central N. Y. Chapter, A.I.A.: Lynton I. Briggs.

New York Society of Architects Medal and Certificate: C. Frederick Wise.

Paul Dickinson Prize: Not awarded.

Baird Prizes: (First) Brooks E. Wigginton, Ralph D. Fraser; (Second) John D. Anderson, Theodore Q. Hoffman.

Edward Palmer York Memorial Prizes: (First) John W. Jackson, (Second) Allan R. Kramer.

Gargoyle Prizes: (First) Henri V. Jova, (Second) Robert H. Eisele.

ROME PRIZE

WINNERS Following is a list of graduates of this college who have won the Fellowship of the American Academy

in Rome: Edward Lawson, 1915-1920; Raymond M. Kennedy, 1916-1920; Ralph E. Griswold, 1920-1923; Norman T. Newton, 1923-1926; George Fraser, 1925-1928; Michael Rapuano, 1927-1930; Richard C. Murdock, 1930-1933; Neil H. Park, 1931-1933; Morris E. Trotter, 1933-1935; James M. Lister, 1935-1937; Robert S. Kitchen, 1936-1938; John F. Kirkpatrick, 1937-1939; Stuart M. Mertz, 1938-1940; Frederick W. Edmondson, jr., 1939-1941.

The Courses of Study Leading to Degrees

DESCRIBED AND

ANALYZED

The next following pages are devoted to description and analysis of the courses of study which lead respectively to the degrees of Bachelor of Architecture, Bachelor of Landscape Architecture, and Bachelor of Fine Arts. Appended to that series is a statement of the instruction that is offered in Regional and City Planning and in Housing.

REQUIRED

WORK

The requirement for each degree is the completion of a specified number of hours of work, exclusive of the University's requirements in Hygiene and in Military Science and Tactics or Physical Education. The hour, as a unit of the requirement, represents either one hour a week of lecture or recitation throughout the term, or two and one-half hours a week of work in laboratory or drafting room throughout the term.

ELECTIVE

STUDIES

In each of the several courses of study leading to degrees generous credit is given for elective studies. The student's choice of electives is unrestricted except that he must include at least six hours in English or Advanced Language. Before he begins his elective study he is required to plan his entire elective program, have it approved by his faculty adviser, and file it in the college office.

SELECT FIELDS

OF STUDIES

Qualified candidates for the degree of Bachelor of Architecture may enter upon a Select Field of Study for the period of the fourth and fifth years. These fields are defined respectively as Architectural Construction, Landscape Architecture, Regional and City Planning, and History of Architecture. A candidate for such study must first confer with his faculty adviser and obtain the approval of the department in which his chosen field of study lies. If the adviser and the department concerned agree, the head of that department presumably will become the student's adviser and will aid him in his selection of courses.

Candidates for the degree of Bachelor of Landscape Architecture may elect to study in the Select Field of Regional and City Planning.

Course Leading to the Degree of

DESCRIPTION The course of study which leads to the degree of Bachelor of Architecture is designed to afford both the technical and the cultural foundation for professional work. It recognizes the dependence of the profession of architecture not only upon technical skill but also upon a cultivated taste and a training of the creative imagination. It emphasizes the architect's obligation to society as well as to the client.

The student is advised to take the regular course, which is outlined on the opposite page, unless he is fitted to enter one of the Select Fields of Study (page 17). In all the courses, both regular and select, the main body is the same and it contains more than the minimum of instruction required for professional registration by the National Council of Architectural Registration Boards and by New York State.

In the first column below are listed the subjects which are common to the regular course and to all the Select Fields of Study. In the second column are typical examples of three of the select fields.

COURSES COMMON TO ALL <i>Required of all candidates for the degree of Bachelor of Architecture</i>	TYPICAL EXAMPLES OF SELECT FIELDS OF STUDY																																																																																																											
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center;">C.E. 280</td> <td style="text-align: center;">3</td> </tr> <tr> <td></td> <td style="text-align: center;">C.E. 227**</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Drawing and Painting</td> <td style="text-align: center;">310</td> <td style="text-align: center;">6</td> </tr> <tr> <td></td> <td style="text-align: center;">311</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Elementary Sculpture</td> <td style="text-align: center;">330</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Color</td> <td style="text-align: center;">340</td> <td style="text-align: center;">2</td> </tr> <tr> <td>History</td> <td style="text-align: center;">410</td> <td style="text-align: center;">3</td> </tr> <tr> <td></td> <td style="text-align: center;">411</td> <td style="text-align: center;">4</td> </tr> <tr> <td></td> <td style="text-align: center;">412</td> <td style="text-align: center;">4</td> </tr> <tr> <td>Graphics</td> <td style="text-align: center;">510</td> 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*English or one foreign language must be included in elective studies.

**Those who select Construction may omit C.E. 227.

***Problems dealing with some phase of City Planning or Housing may be substituted for the regular problems in Architectural Design, 113, and for Thesis, 114.

Bachelor of Architecture

ANALYSIS The table below contains a list of all the courses of instruction that are regularly required of candidates for the degree of Bachelor of Architecture. Any student who does not present for entrance at least 1 unit in History, 3 units in Foreign Language, 1 unit in Physics, 1 unit in Chemistry, and 4½ units in Mathematics must take, as electives, courses to make up the deficiency. If Solid Geometry is lacking it must be taken in the first term of the first year.

		HOURS	
		<i>First Term</i>	<i>Second Term</i>
COURSES OF INSTRUCTION			
*FIRST YEAR	Design, 110	3	3
31 HOURS	Drawing, 310	3	3
	Descriptive Geometry, 510	3	3
	Mathematics, 8	0	3
	History of Architecture, 410-411	3	4
	Electives	3	0
*SECOND YEAR	Design, 111	4	4
32 HOURS	Mechanics, 210	0	3
	Modeling, 330	2	or 2
	Color, 340	2	or 2
	History of Architecture, 412-413	4	3
	Mathematics, 8	3	0
	Perspective, 511	0	1
	Electives	3	3
THIRD YEAR	Design, 111-113	4	8
31 HOURS	Mechanics, 210	3	0
	Structural Design, 211	0	3
	History of Art, 414	3	0
	Materials, 610	3	3
	Testing Materials, 227	0	1
	Electives	3	0
FOURTH YEAR	Design, 113	8	0
32 HOURS	Structural Design, 212	3	0
	Intermediate Drawing and Painting, 311	0	3
	Applied Design, 611	0	9
	Concrete, 280	3	0
	Electives	3	3
FIFTH YEAR	Design, Thesis, 113-114	8	8
29 HOURS	Intermediate Drawing & Painting, 311	3	0
	Electives	4	6

*The University requirements in Hygiene and Military Science and Tactics or Physical Education must be met in these years in addition to the courses listed.

Note. In addition to the 155 credit hours needed for the degree, there is a Summer Sketching requirement explained on page 46.

Course Leading to the Degree of

DESCRIPTION The purpose of landscape architecture, as a fine art, is to prepare areas of land for human use and enjoyment and at the same time to preserve, enhance, and create beauty in the landscape. The range of professional practice must include a knowledge of all the materials, methods, and processes that are needed for the planning of a finished piece of work. Fundamental training in architecture, in engineering, in floriculture, and in horticulture is required for the landscape architect's equipment. His range should be even wider, for he needs to acquire facility of expression in the graphic arts, familiarity with the arts of painting and sculpture, and acquaintance with such diverse subjects as regional and city planning, history, civil government, economics, sociology, geology, and forestry.

The course leading to the degree of Bachelor of Landscape Architecture puts emphasis on a correlative study of Architecture as a help to the training of the student's aesthetic judgment and to his mastery of applied design in his own field. It recognizes that he will need a sympathetic knowledge of the architect's professional problems and point of view, a disciplined sense of the relation of buildings to landscape, and a ready skill in the treatment of their surroundings if he is to deal successfully with the larger problems involved in the development of land for varieties of human use. The student is encouraged also to make use of the courses in Regional and City Planning.

FLORICULTURE AND ORNAMENTAL

HORTICULTURE A course leading to the degree of Bachelor of Science is given in the New York State

College of Agriculture at Cornell University by the Department of Floriculture and Ornamental Horticulture. The instruction in *Floriculture* is designed for (1) those who intend to make some branch of commercial flower-growing their life work, (2) those who plan to enter a retail business in floriculture, (3) those who are interested in amateur flower-growing for pleasure and home decoration, and (4) those who plan to take up some line of work on private estates or in city parks. The instruction in *Ornamental Horticulture* is designed primarily to fit students for nursery management, that is, the propagation, growing, and selling of ornamental plants, and for nursery service and the planting of small properties; there is also included training for park service, for the management of private estates, and for work such as is done by planting superintendents for landscape architects. Persons interested primarily in the instruction in Floriculture or Ornamental Horticulture can best obtain further information by consulting the Announcement of the New York State College of Agriculture.

Bachelor of Landscape Architecture

ANALYSIS The table below contains a list of all the courses of instruction that are regularly required of candidates for the degree of Bachelor of Landscape Architecture. (Any student who does not present for entrance at least 1 unit in History, 3 units in Foreign Language, 1 unit in Physics, 1 unit in Chemistry, and 4½ units in Mathematics, must take, as electives, courses to make up the deficiency. If Solid Geometry is lacking it must be taken in the first term of the first year.

		COURSES OF INSTRUCTION	HOURS	
			First Term	Second Term
*FIRST YEAR	31 HOURS	Design, 110	3	3
		Drawing, 310	3	3
		Descriptive Geometry, 510	3	3
		History 410, 411	3	4
		Mathematics, 8	0	3
		Electives	3	0
*SECOND YEAR	31 HOURS	Design, 150a	4	4
		Mechanics, 210	0	3
		Intermediate Drawing & Painting, 311 Elementary Sculpture, 330 Color, 340 }	(3 or 2)	(3 or 2)
		History, 412	4	0
		Mathematics, 8	3	0
		Perspective, 511	0	1
		Surveying, C.E. 111	0	2
		History, 450	0	3
		Electives	3	0
THIRD YEAR	31 HOURS	Design, 150b	4	4
		Mechanics, 210	3	0
		Plant Materials, 8	4	4
		Surveying, C.E. 212 and 212A	2	2
		Plant Materials, 3a	0	2
		History, 413	0	3
		Electives	3	0
FOURTH YEAR	33 HOURS	Design, 151	8	8
		Planting Design, 650	2	2
		Highway Engineering, C.E. 265	3	0
		Plant Materials, 3b	1	0
		Landscape Construction, 660	0	3
		Electives	3	3
FIFTH YEAR	29 HOURS	Design, Thesis, 151, 152	8	8
		Planting Design, 651	2	0
		Landscape Construction, 660	3	0
		Electives	2	6

*The University requirements in Hygiene and Military Science and Tactics or Physical Education must be met in these years in addition to the courses listed.

Note. In addition to the 155 credit hours needed for the degree, there is a Summer Sketching requirement explained on page 46

Course Leading to the Degree of

DESCRIPTION The course of study which leads to the degree of Bachelor of Fine Arts is designed to provide a coordinated technical training and cultural education for the painter or the sculptor. It aims to develop creative ability while the student is learning the necessary technique.

The student may elect to study either painting or sculpture. The work in elementary and life drawing, history, anatomy, and the electives is common to both those lines of study. In the second year the lines diverge, the sculptor beginning a four-year sequence of work in modeling, carving, and sculptural composition, while the painter begins his study in color, painting, and pictorial design. Collaborative work is encouraged, however, and problems requiring the work of painter, sculptor, architect, and landscape architect are given from time to time. In the group of electives the student is encouraged to explore a range of subjects and to choose those best fitted to his individual needs.

Candidates for the degree of Bachelor of Fine Arts are normally required to take all the courses of instruction listed in the first column below, and in addition all those listed in the second column, under either Sculpture or Painting as the student may determine.

COURSES COMMON TO BOTH OPTIONS				SCULPTURE	
	<i>Course</i>	<i>Hours</i>		<i>Course</i>	<i>Hours</i>
Composition	300	4	Composition (for Sculptors) . . .	301	12
Drawing and Painting	310	6		304	12
	311	8	Sculpture	331	8
	311	8		334	32
Sculpture	330	4		<hr style="width: 100%;"/>	64
History	1a & 1b	6			
	10a & 10b	6			
	Elective	6			
Descriptive Geometry	510	6			
Perspective	511	1			
Anatomy	24	6	Composition (for Painters)	301	12
Thesis	350	8		304	12
Electives	<u>30</u>	<u>30</u>	Drawing & Painting	311	8
				314	24
			Painting Technics	324	6
			Graphic Arts	325	2
				<hr style="width: 100%;"/>	64
Total Hours		91			

Bachelor of Fine Arts

ANALYSIS The table below contains a list of all the courses of instruction that are regularly required of candidates for the degree of Bachelor of Fine Arts. (Any student who does not present for entrance at least 1 unit in History, 3 units in Foreign Language, and 1 unit in Laboratory Science must take, as electives, courses to make up the deficiency. •

		HOURS	
		First Term	Second Term
COURSES OF INSTRUCTION			
*FIRST YEAR	Composition, 300	2	2
28 HOURS	Drawing and Painting, 310	3	3
	History of Painting and Sculpture, 1a and 1b	3	3
	Descriptive Geometry, 510	3	3
	Electives	3	3
*SECOND YEAR	Composition, 301	3	3
31 HOURS	Drawing and Painting, 311	4	4
	Sculpture, 330	2	2
	History of Architecture, 10a and 10b	3	3
	Perspective, 511	0	1
	Electives	3	3
THIRD YEAR	Composition, 301	3	3
32 HOURS	Drawing and Painting, 311 (Sculpture 331)**	4	4
	Anatomy, 24	3	3
	History of Art, elective	3	3
	Electives	3	3
FOURTH YEAR	Composition, 304	4	4
32 HOURS	Drawing and Painting, 314 (Sculpture 333)**	6	6
	Painting Technics, 324	3	3
	Electives	3	3
FIFTH YEAR	Composition, 304	4	0
32 HOURS	Drawing and Painting, 314 (Sculpture 333)**	6	6
	Graphic Arts, 325 (Sculpture 333)**	2	0
	Thesis	0	8
	Electives	3	3

Total — 155 hours

()** Denotes course for sculptors.

Regional and City Planning and Housing

THE INSTRUCTION City planning may be said to be the art and science of so shaping man's physical environment as best to serve the general welfare in comfort, convenience, health, and aesthetics. Regional planning implies the application of the same principles to the larger problems of county, state, region, and nation. In each case the term planning implies physical planning only, but it is recognized that sound physical planning must be based on social and economic principles. Among the important needs of modern civilization is an intelligent guidance of both urban and rural development. Ugliness, inconvenience, menaces to public health, and serious economic waste are the results of haphazard growth in city and country.

In Regional and City Planning the study aims to apply foresight and intelligence to the development of land for human use; courses deal broadly with the adaptation of man's environment to his needs and tastes. A study is made of past and of possible future achievement in planning and controlled developments, public and private.

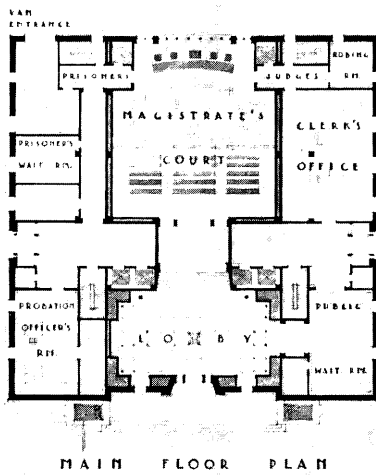
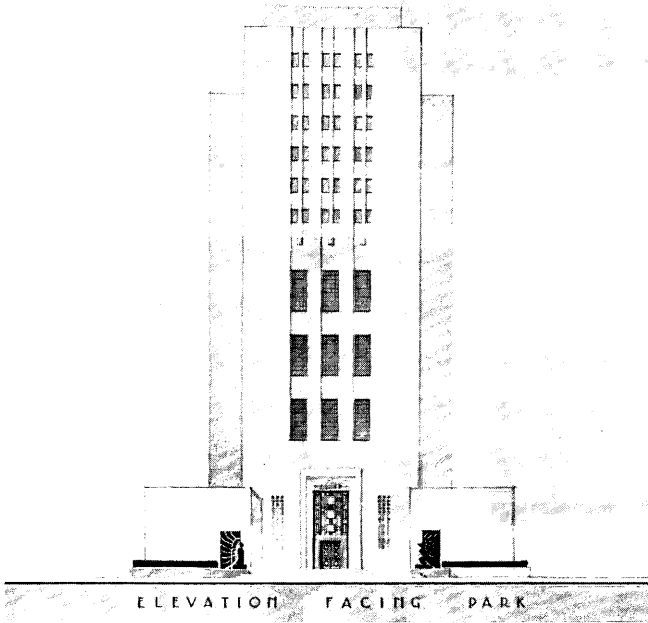
Instruction in Regional and City Planning and in Housing is given by the Colleges of Architecture and Engineering in cooperation. The courses are described on pages 44-46. They are not arranged to lead to a professional degree in planning. They are open to students with a background of Architecture, Landscape Architecture, or Engineering and to upperclassmen otherwise prepared to profit by an understanding of the problems that they deal with. They are so comprehensive that the upperclassman or graduate student with a technical background and a special interest may gain from them a fundamental knowledge of the principles and practice of physical planning as applied to large areas. He can make all the better use of them if he will take them in combination with allied instruction offered by other departments of the University.

Students of the College of Architecture may supplement the lectures and seminars with projects in design dealing with specific problems in city planning or in housing. Such projects may be substituted, with the permission of the Faculty, for regularly scheduled problems in Advanced Design in either Architecture or Landscape Architecture. Any qualified student of the College of Architecture may also take a problem of planning or housing as the subject of his thesis.

Instruction in Regional and City Planning is offered in the Graduate School. Students with degrees in Architecture or Landscape Architecture respectively, shall have had work in these fields equivalent to that required for the degrees of B.Arch. or B.Landscape Arch. at Cornell. Others, candidates for degrees in the Graduate School, shall have had major work in economics, government, sociology, or civil engineering.

A Few Recent Examples of Students' Work

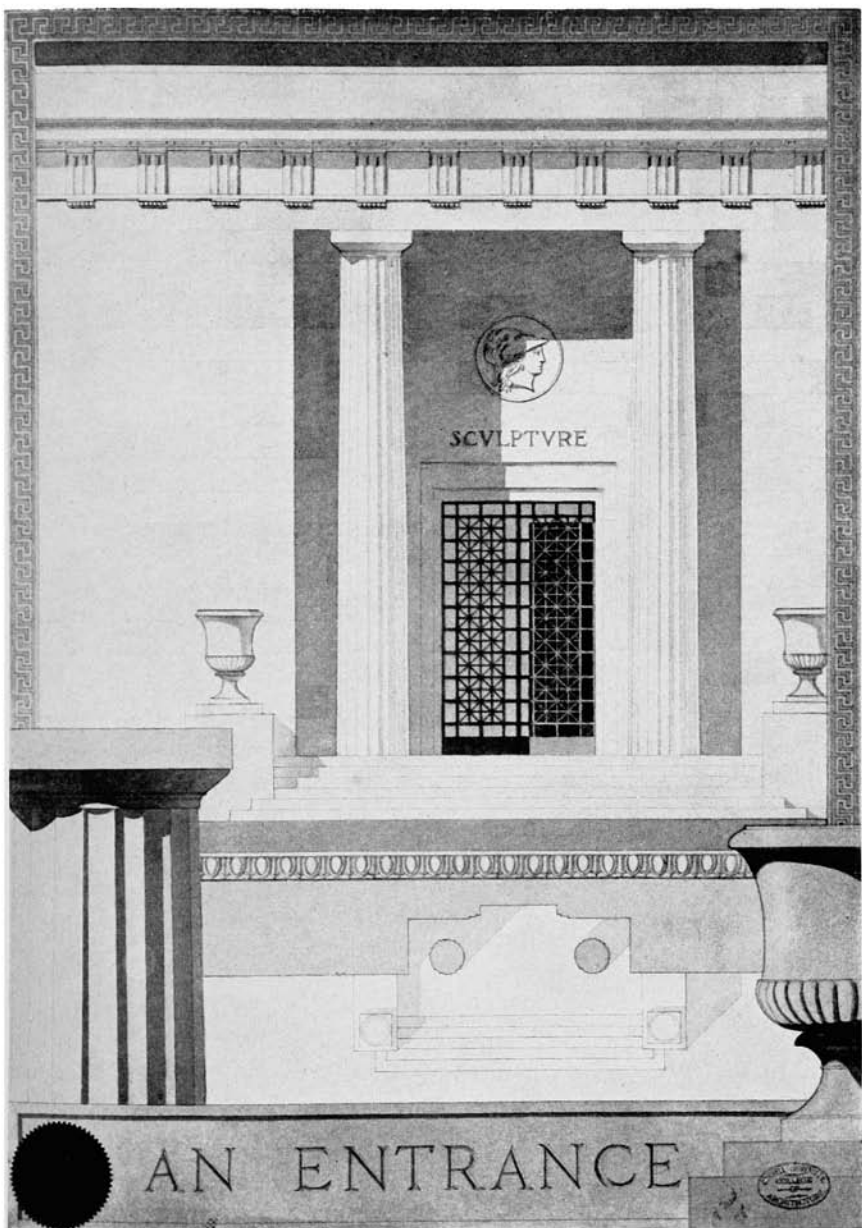




ADVANCED DESIGN

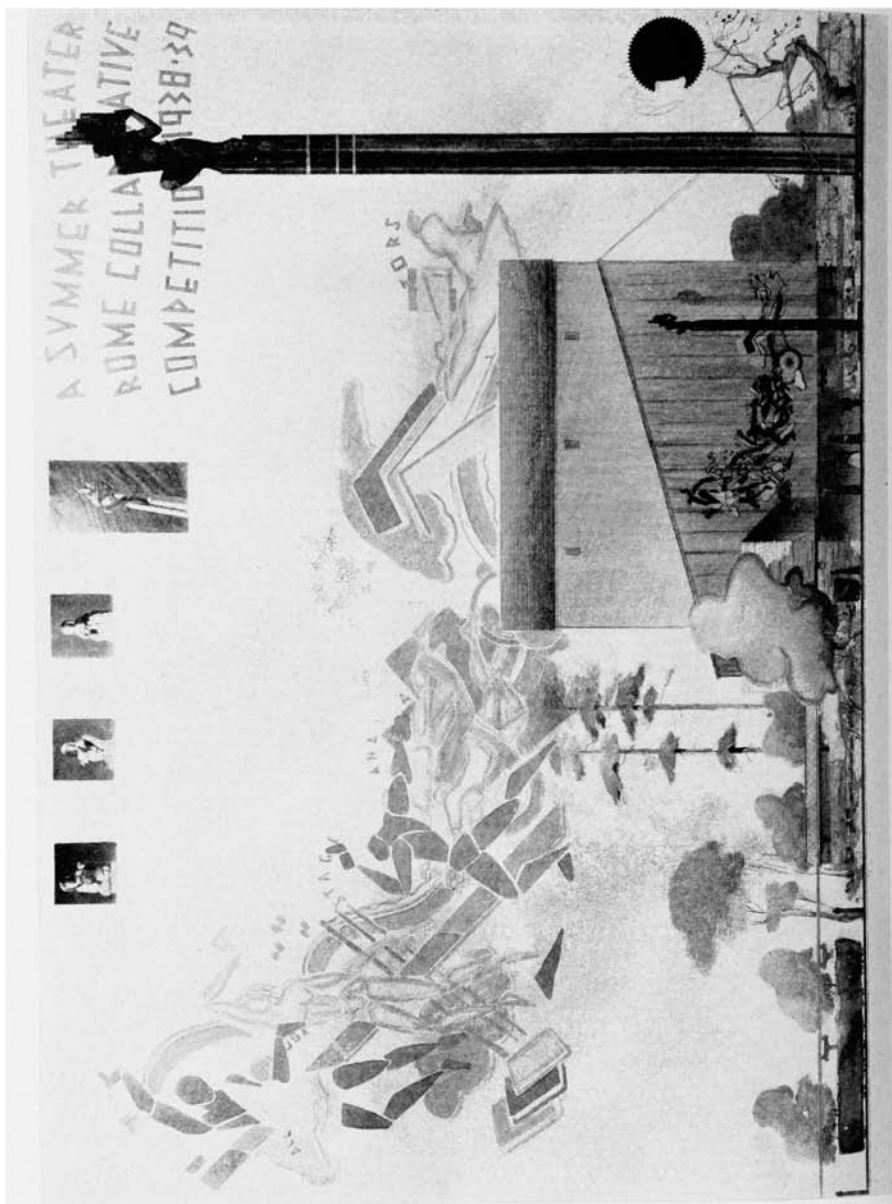
A City Court House

LYNTON I. BRIGGS

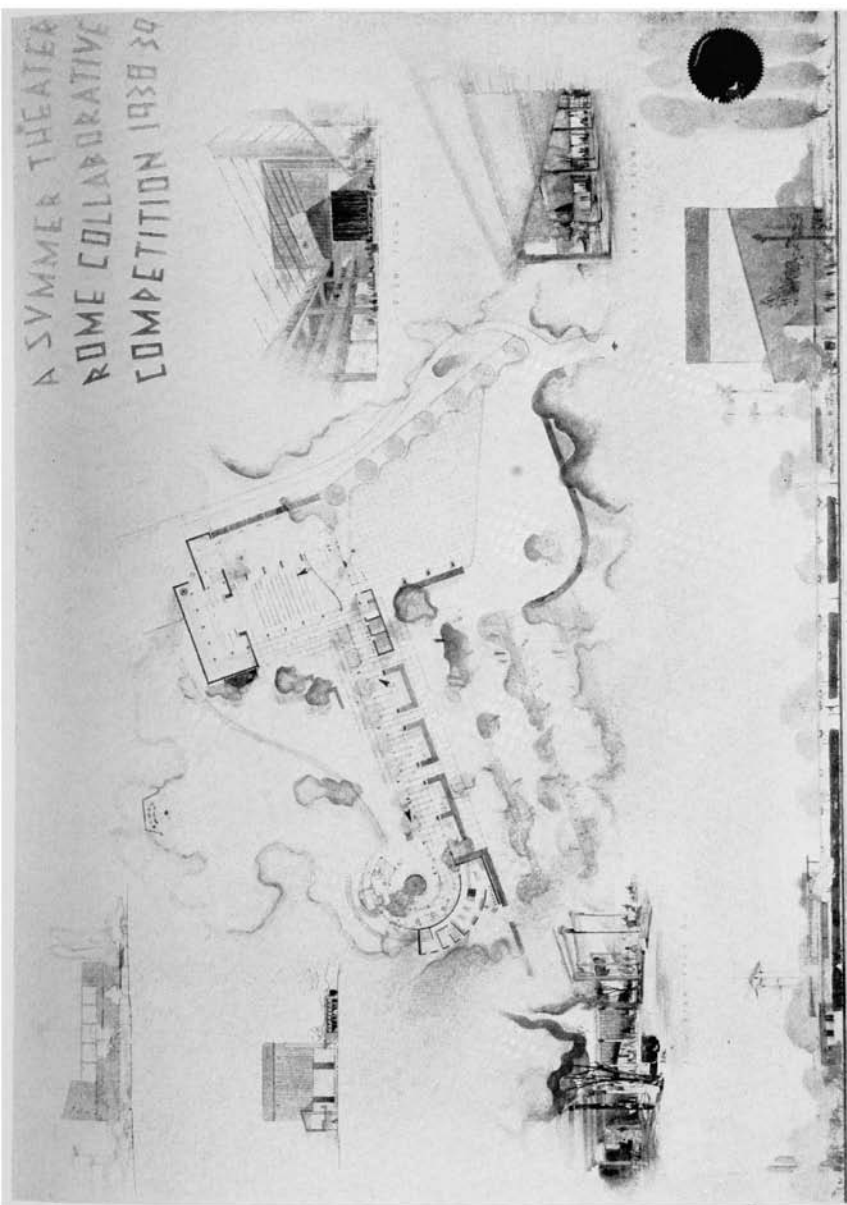


ELEMENTARY DESIGN

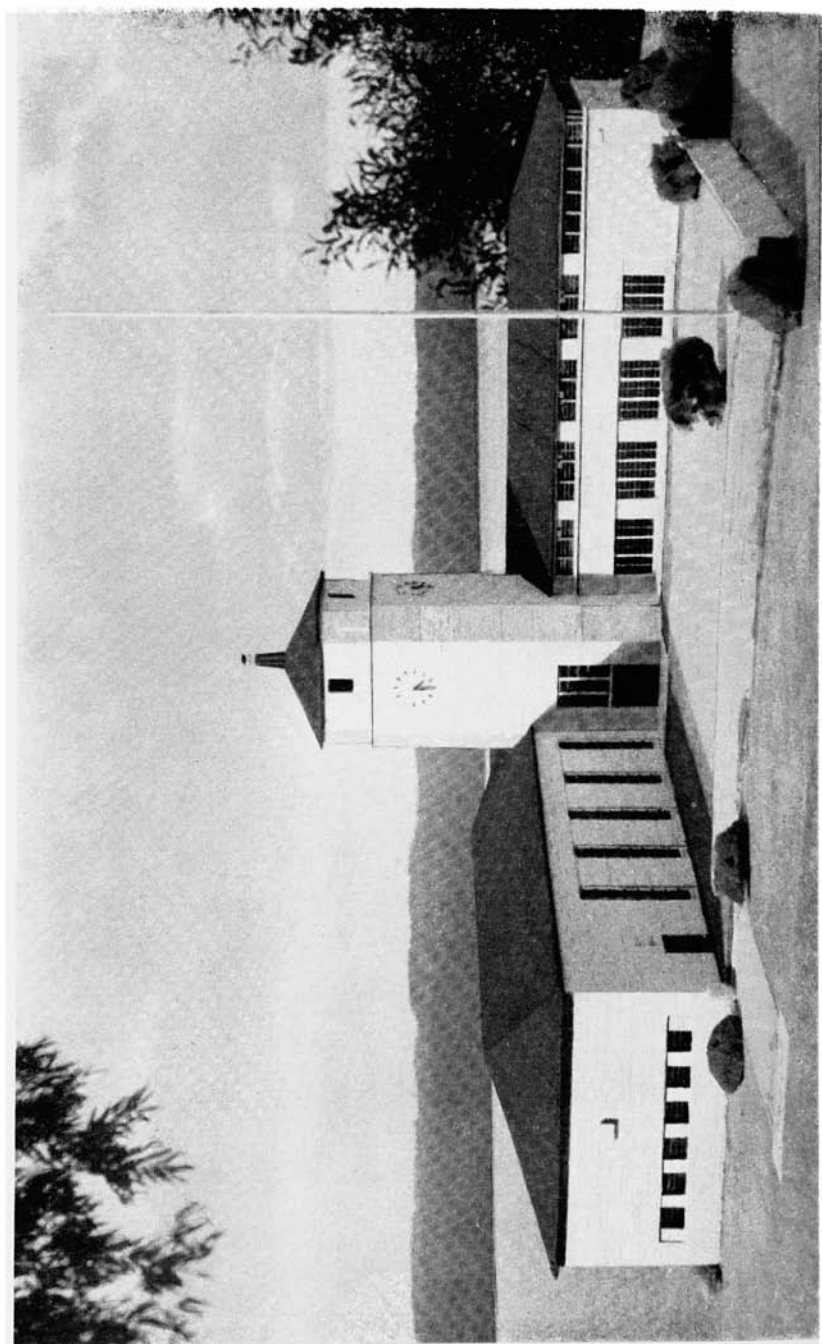
ROBERT S. MCCOY



DESIGN BY ARCHITECT, LANDSCAPE ARCHITECT
O. H. DAHLSTRAND, *Architect*; G. W. ATKINSON, *Land*
This Design received the First Prize Award
New York City in 1938-39 by the



SCULPTOR, AND PAINTER, IN COLLABORATION
Architect; ELFRIEDE ABBE, *Sculptor*; R. E. ROGERS, *Painter*
International Collaborative Competition held in
the American Academy in Rome



INTERMEDIATE DESIGN

A Town Hall

WINTHROP D. ALLEN



THESES IN PAINTING

ADELAIDE E. BRIGGS



FOURTH YEAR MODELING

ELFRIEDE ABBE



ELEMENTARY MODELING
JASON SELEY



FIRST YEAR DRAWING
DOROTHY PAPISH

The Courses of Instruction

SUBJECT

MATTER The preceding analysis of the several courses of study leading to degrees showed them to consist of individual *courses of instruction*. All these individual courses are described in the list which now follows. Here they are arranged under heads appropriate to their subject matter. They are all elements of the regular work of the College of Architecture. In most of them the instruction is given by members of the Faculty of Architecture. In the others—those which come toward the end of the list—the instruction is given by members of other faculties. That is characteristic of Cornell University's organization: instruction given in one department is not as a rule duplicated in another. Accordingly the instruction in Mathematics, English, Physics, and Chemistry is given in the College of Arts and Sciences, that in Anatomy in the Medical College, that relating to Plant Materials in the College of Agriculture, and that of certain other courses in the School of Civil Engineering. All this instruction, however it may appear to be dispersed, is nevertheless coordinated with the work of the College of Architecture.

[Courses of instruction open to students not registered in the College of Architecture are marked with an asterisk (*) preceding the title of the course. The enrollment in any course is limited. Students not registered in the College of Architecture are required to pay a fee of \$5 a term for each course in Design, Drawing, or Modeling. If the student is enrolled in more than two such courses the total fee is \$10.]

THEORY OF

ARCHITECTURE This work is intended as a supplement to Architectural and Landscape Design. Here the student gains an introduction to the critical literature of Architecture and Landscape Architecture and to the various theoretical principles of design as expressed in historic and contemporary buildings.

Advanced Theory

Seminar 012. First term or second term. Credit one hour each term. Members of the staff in Architecture. Open to students in Advanced Architectural Design and to graduates. Students planning

to register for this course must obtain permission from the Dean before registration day. Room and hour to be announced.

Advanced Theory

Seminar 014. First term. Credit two hours. Prerequisite, Course 113 or 150b. Registration limited. Study of the methods and aims of contemporary architecture and its relation to various historical precedents. Room and hour to be announced.

Landscape Architecture

Seminar 070. First or second terms. Credit one hour each term. Mr. MONTILLON or Mr. LAWSON. Open to upperclassmen and graduates. By appointment.

DESIGN Instruction in Architectural and Landscape Design is given by the Design staff—Messrs. BOSWORTH, SEYMOUR, BURNHAM, MONTILLON, GUGLER, LAWSON, HARTELL, and ——— and consists of individual criticism over the drafting board. By appointment.

ARCHITECTURAL

DESIGN Among the courses leading to the degree of Bachelor of Architecture, design is the basic course and has the greatest number of hours allotted to it. It is in this sequence of courses that the student is expected to demonstrate his ability to solve specific problems in such a manner that the final result is a structure efficiently planned, solidly constructed, aesthetically satisfying, and in harmony with its surroundings. All other courses leading to this degree are considered as contributing to these objectives.

Elementary

Design 110. Throughout the year. Credit six hours on completion of the course. The first principles of architectural design and construction with drawings in pencil and ink, rendered in wash and color. M W F 1:40-4.

Intermediate

Design 111. Throughout three terms. Credit twelve hours on completion of the course. Prerequisite, Course 110. A series of problems in architectural composition and planning.

Advanced

Design 113. Throughout three terms. Credit twenty-four hours on completion of the course. Prerequisite, Course 111.

*Thesis in
Architecture*

114. Credit eight hours. Prerequisite, Course 611 and (except for special cases) three terms of Course 113.

LANDSCAPE

DESIGN

Among the courses leading to the degree of Bachelor of Landscape Architecture, design is the basic course and all other courses are considered as contributing to it. The student must develop an appreciation of the beauty which can be created or preserved by the nature and contours of the ground and by water in its relation to the ground as well as by the form and character of growing vegetation. He must learn how to use those elements of composition with due regard for their aesthetic and practical values. He is expected also to acquire sufficient knowledge of architectural design to create proper settings for structures.

Intermediate

Landscape Design 150a. Throughout the year. Credit eight hours on completion of the course. Prerequisite, Course 110. Half of the work of this course is identical with that of course 111. One lecture discussion period each week on the theory of landscape design. Hour to be arranged.

Intermediate

Landscape Design 150 b. Throughout the year. Credit eight hours on completion of the course. Prerequisite, Course 150 a.

Advanced

Landscape Design 151. Throughout three terms. Credit twenty-four hours on completion of the course. Prerequisite, Course 150 b.

Thesis in

Landscape Architecture 152. Credit eight hours. Prerequisite, Course 151.

RENDERING

Architectural Rendering 170. Either term. Credit two hours. Mr. SEYMOUR. Prerequisite, Course 110. By appointment. Registration limited. Students must obtain permission from Mr. SEYMOUR before registering for this course.

THEORY OF CONSTRUCTION

These courses (210-211-212), together with Concrete Construction (C.E. 280, described on page 52) and Testing Materials (C.E. 227, page 51) deal in the beginning with the theories and progressively more with the practice of Structural Design.

Mechanics

of Materials 210. Second and first terms. Credit three hours each term. Prerequisite, Mathematics 8. Mr. YOUNG. Second term: a brief study of the principles of analytic and graphic statics. Recitations. Section A, M W F 9. Section B, T Th S 9. White B 10. First term: the effects of loading in producing stress and deformation in beams, columns, and masonry. Two recitations and one computing period. Section A, M W 9; Th 1:40-4. Section B, T Th 9; Th 1:40-4. White B 10.

Structural

Design 211-212. Second and first terms. Credit three hours each term. Prerequisite, Course 210. M W F 1:40-4. Mr. BAXTER. Lectures, computations, and reports. Graphic statics. Detailed design of steel skeleton frame, roof truss, plate girder, miscellaneous details; heavy timber building frame, truss details; masonry arch; retaining wall. (First term, 211, is a prerequisite for Concrete Construction, C.E. 280, and for Applied Design 611.)

DRAWING: PAINTING:

SCULPTURE Instruction in Freehand Drawing and the Fine Arts is given by the Fine Arts staff—Messrs. MIDJO, HARTELL, STONE, WASHBURN, MAHONEY, and GIBBS, and _____.

Certain of the advanced courses in this department may be elected by specially qualified students with the permission of the professor in charge of the course.

COMPOSITION

These courses consist of the study and application of the underlying principles of Composition. They are presented by means of series of problems in pictorial and decorative design in line, tone, and color, or in sculptural groups. Special study is made of design appropriate to architectural settings for contemporary use. Collaborative problems are given from time to time which require the

combined efforts of painter, sculptor, architect, and landscape architect. Criticism periods in all courses in composition are held Tuesday and Thursday afternoons, 1:40-4; other periods will be arranged.

In courses 300 to 304 the number of credit hours per term is based upon one credit hour per laboratory period of two and one half hours. Credit hours to be arranged upon registration in consultation with instructor in charge.

**Elementary*

Composition 300. Throughout the year. Credit two to four hours each term. Franklin 37.

Intermediate

Composition 301. Throughout four terms. Credit three to six hours each term as arranged. Franklin 37.

Advanced

Composition 304. Throughout three terms. Credit four to six hours as arranged. By appointment. Franklin 37.

DRAWING AND
PAINTING

This sequence of courses deals with the study of form and its representation by means of line, tone, and color. Emphasis is given to the drawing and painting of forms in their spatial relationships. Geometric objects, casts, and still life and landscape materials are used in the first year's work. In the intermediate and advanced courses studies of the nude and draped model and of portraiture are added.

In Courses 311 and 314 the number of credit hours per term is based upon one credit hour per laboratory period of two and one half hours. Credit hours to be arranged upon registration in consultation with instructor in charge.

**Creative*

Drawing 309. Throughout the year. Credit three hours each term. M 3. White 28, W F 1:40-4. Franklin 37. This course is designed to meet the needs of the non-professional student interested in art; the course includes a study of the methods used in drawing and painting in showing their relation to the artistic content of the resultant work. Studio work, lectures, assigned readings, and examinations. Illustrative material will be drawn largely from contemporary sources.

Elementary Drawing and Painting 310. Throughout the year. Credit three hours each term. Section A, T Th S 10-12:30. Section B, M W F 10-12:30. Morse Hall Gallery.

Intermediate Drawing and Painting 311. Throughout four terms. Credit three to six hours each term as arranged. (Students in Architecture and Landscape Architecture take three hours for two terms and one term respectively.) Section A, M W Th F 10-12:30. Section B, M W Th F 1:40-4. Franklin 38.

Advanced Drawing and Painting 314. Throughout four terms. Credit four to ten hours each term as arranged. M T W Th F 8-12:30. Franklin 38.

Painting Technics 324. Throughout the year. Credit three hours each term. Hours to be arranged. Prerequisite Course 311. A study of the medium of Egg Tempera and the various methods of painting in oils. The grinding of pigments and preparation of grounds. Readings, discussions, and laboratory work.

**Graphic Arts* 325. Throughout the year. Credit two hours each term. Hours to be arranged. Prerequisite: Course 310 and permission of instructor. The methods of Dry-point Etching and Wood Block printing and a study of drawing and painting for various methods of commercial reproduction.

SCULPTURE The courses in modeling begin with a study of the basic relationships of forms to voids. Architectural ornament and the human figure are studied from cast. Beginning in the second year, nude and costumed models are used. Portrait use is studied. The work closely parallels that in Composition. Studies made in these modeling courses may be used as material for problems in Composition. Instruction is given in casting in plaster, in direct carving, and in the use of the pointing machine.

In Courses 331 to 333 the number of credit hours per term is based upon one credit hour per laboratory period of two and one half hours. Credit hours to be arranged upon registration in consultation with instructor in charge.

**Elementary*

Sculpture 330. Throughout the year. Credit two to four hours each term, as arranged. Students in Architecture and Landscape Architecture take two hours for one term. Prerequisite, Course 310. Th S 8-10:30. Morse Hall.

Intermediate

Sculpture 331. Throughout the year. Credit three to six hours each term as arranged. T Th S 8-12:30. Morse Hall.

Advanced

Sculpture 333. Throughout four terms. Credit four to ten hours each term as arranged. Hours same as 331. Morse Hall.

**COLOR*

These courses are, in sequence, the representation of still life groups in Pastel, Oil, and Water Color. In the elementary work the simple medium of pastel is used and the student is given instruction in the theory of color as applied to representation. In the subsequent courses, oil and water color are the media used. The study of color harmony is encouraged. Further study of color harmony is carried on in the courses in Composition.

Color

340-341-342. Throughout the year. Credit two hours each term in each course. One or two extra credit hours may be taken by special arrangement in courses 341 and 342. First and second terms: Section A, M W 10-12:30. Section B, T Th 10-12:30. Prerequisite, Course 309 or 310 or otherwise by special permission.

THESIS

350. Second term. Credit eight hours. Prerequisite, twelve hours of Course 304 and either twenty-four hours of Course 314 or thirty-two hours of Course 333.

HISTORY The several courses in History offered in the College of Architecture are primarily in the form of lectures with such supplementary requirements as seem advisable. Chronological sequence is followed with such varying emphasis upon the aesthetic, social, political, and economic considerations as may be required. Greater stress is laid upon purely technical considerations in the courses in the History of Architecture and Landscape Architecture

than in the courses in Painting and Sculpture. The former group are designed primarily as a part of the professional training of students in the College of Architecture, although these courses are presented in such a manner that they may be elected for study by non-professional students. Courses in the History of Painting and Sculpture, on the other hand, are designed to provide a cultural study, and hence have a wider scope of interest in relation to the University at large.

HISTORY OF ARCHITECTURE

**Ancient Architecture* 410. First term. Credit three hours. Mr. UNDERWOOD. Egyptian, Western Asiatic, Greek, Roman, and Early Christian architecture. Lectures and examinations. T Th S 9. White 28.

**Medieval Architecture* 411. Second term. Credit four hours. Prerequisite, Course 410. Mr. DETWEILER. Byzantine, Mohammedan, Romanesque, and Gothic Architecture. Lectures, seminars, and examinations. T Th S 9, and one additional hour to be arranged. White 28.

**Renaissance Architecture* 412. First term. Credit four hours. Prerequisite, Course 411. Mr. DETWEILER. Architecture of the Renaissance in the principal European countries. Lectures, seminars, and examinations. M W F 9, and one additional hour to be arranged. White 28.

**American and Contemporary Architecture* 413. Second term. Credit three hours. Prerequisite, Course 412. Messrs. HARTELL and DETWEILER. The architecture of the United States in the Seventeenth and Eighteenth centuries and of Europe and the United States from 1800 to the present. Lectures, readings, and examinations. M W F 9. White 28.

Greek Sculpture and Italian Fresco Painting 414. First term. Credit three hours. Mr. FINLAYSON. General survey of the development of Greek Sculpture as a cultural manifestation, followed by a survey of Italian fresco from early Christian times to the eighteenth century. Lectures, assigned readings, and examinations. M W F 10. White 28. Open to third, fourth, and fifth year students in the College of Architecture.

**Ancient and Medieval*

Painting and Sculpture 1 a. First term. Credit three hours. Mr. WAAGE. This course is a prerequisite for all other courses in the history of painting and sculpture, with the exception of 414. All students must register for this course with Mr. WAAGÉ or Mr. FINLAYSON on registration day, freshmen at the Drill Hall, upperclassmen at 46 White Hall. M W F 2. Goldwin Smith, Museum of Casts.

**Renaissance and Modern*

Painting and Sculpture 1 b. Second term. Credit three hours. Mr. FINLAYSON. A continuation of 1 a, which is a prerequisite. Development of painting and sculpture in major European countries from 1400 in the case of Italy, and from 1500 in the case of other countries, to the present day. M W F 2. White 28.

**History of Architecture:*

Ancient and Mediaeval 10 a. First term. Credit three hours. Mr. UNDERWOOD. T Th S 11. White 28.

**History of Architecture:*

Renaissance and Modern 10b. Second term. Credit three hours. Mr. UNDERWOOD. T Th S 11. White 28.

**Northern*

Painting 426. Throughout the year. Credit three hours a term. Mr. FINLAYSON. Painting in France, Germany, the Netherlands, and England, from the sixteenth century to modern times. Courses 1 a and 1 b are prerequisite. M W F 11. White 28. Given in alternate years. Will not be given in 1940-41.

**Romanesque and*

Gothic Sculpture 428 a. First term. Credit three hours. Prerequisite, Course 1 a. Mr. FINLAYSON. Sculpture in the major European countries from 1000 A.D. through the Gothic period. M W F 11. White 28. Given in alternate years. Will be given in 1940-41.

**Gothic*

Painting 428 b. Second term. Credit three hours. Prerequisite, Course 1 a. Mr. FINLAYSON. Painting in Italy in the Fourteenth century and in France, Germany, and the Netherlands in the Fourteenth and Fifteenth centuries. M W F 11. White 28. Given in alternate years. Will be given in 1940-41.

**Historical Seminar in Painting and Sculpture* 429, 430. Throughout the year. Credit two hours a term. Mr. FINLAYSON. Registration limited. Open to graduate students and qualified undergraduates. Ten hours of History of Art or the equivalent is prerequisite. By appointment. Students wishing to elect this course must register with Mr. FINLAYSON in the spring term at least two weeks before the beginning of the final examinations; exception will be made only for graduate students entering the University in September.

**History of Landscape Design* 450. Second term. Credit three hours. Mr. MONTILLON. Lectures, assigned readings, sketches, and examinations. M W F 10. White 28.

**Historic Ornament* 470. Second term. Credit three hours. Prerequisite, Course 412. Not given in 1940-41.

Historical Seminar in Architecture 471. First term. Credit two hours.
472. Second term. Credit two hours. Mr. DETWEILER. Investigation of assigned topics in the history of architecture. Open to graduate students and to upperclassmen by permission. By appointment.

GRAPHICS

**Descriptive Geometry* 510. Throughout the year. Credit three hours each term. Messrs. BAXTER and UDALL. Lectures and drawing. Section A, T Th S 10-12:30; Section B, M W F 10-12:30. White B 10. First term, the fundamental problems of the subject, involving points, lines, planes, and plane solids. Second term, plane and space curves, curved surfaces, tangencies, and intersections. A study of shades and shadows as a direct application of descriptive geometry, with light from any source, followed by the conventional constructions for architectural forms, occupies about the last half of the term.

Perspective 511. Second term. Credit one hour. Prerequisite, Course 510. Mr. BAXTER. Lectures and drawing. F 11. White B 10. The geometry of the subject with various derived techniques for its practical application. Direct projection; the geometry and use of

vanishing points and traces; the perspective plan; inclined picture; plane ('three point'); circles and other curves; various special constructions; shades and shadows.

APPLIED

CONSTRUCTION The following courses, two in Architecture and three in Landscape Architecture, are designed to correlate all the courses previously taken by the student into a realization of actualities. Behind it is the thought that office practice requires drawings, specifications, and contracts developed from a thorough knowledge of the client and his problem as well as the fact that working drawings, specifications, and contracts must be thoroughly related and checked one against the other. Problems are given, to be solved just as they should be solved in an office.

Building Materials

and Construction

610. Throughout the year. Credit three hours each term. Prerequisite, four terms in the College of Architecture or the equivalent. Mr. TILTON. A brief study of structural materials and details of construction with particular reference to concrete, masonry, ordinary construction, slow burning construction, fireproof construction. Lectures and discussions. T Th S 8. White 28.

Applied

Design

611. First or second term. Credit nine hours. Prerequisite, Courses 211, 610, and one term of 113. Mr. TILTON, assisted by one member of the design staff and one member of the construction staff. The course consists in the design of structures, demonstrated by preliminary sketches, small scale and large scale working drawings, structural and mechanical reports. The drafting room work is paralleled with discussions on mechanical equipment, specifications, contracts, and general office practice. Discussions, M W 8 and another hour to be arranged. White 28. Criticisms by appointment.

Office

Practice

612. Throughout the year. Credit one hour a term. Mr. YOUNG. A seminar devoted to discussion of professional ethics and other problems arising in the day to day procedures in office practice. Registration limited and by permission only.

**Planting*

Design

650. Throughout the year. Credit two hours each term. Prerequisite, Plant Materials 8. The first term of this course, given during the second term of the school year, is open to

election by special permission. Mr. LAWSON. Lectures, sketching, drafting, and field trips. Th 10-12:30. White B 6.

Advanced Planting

Design 651. First or second term. Credit two hours. Prerequisite, Planting Design 650 and permission to register. Mr. LAWSON, by appointment. Lectures, assigned reading, drafting, and field trips. White B 6.

Landscape

Construction 660. Second and first terms. Credit three hours each term. Prerequisite, Mechanics 210, C.E. 212, and C.E. 265. Messrs. YOUNG and MONTILLON. (Second term: problems involving the application of the principles of mechanics to the design of structures of a simpler sort, such as post and lintel construction, short-span truss, short-span arch, a small bridge, simpler types of low dams, and retaining walls, foundations, and culverts. Lectures, problems, and reports. (First term: problems in earthwork, grading, and location plans, sections, profiles, and cross sections, working drawings. Lecture and drawing periods. Hours to be arranged. White B 6.

REGIONAL AND

CITY PLANNING: HOUSING Instruction in Regional and City Planning is offered by the Colleges of Architecture and Engineering in cooperation. The work aims to give the student an appreciation of the special problems of large-scale planning. Study is made of past and possible future achievement in the planned and controlled development of public and private properties as a necessary basis for better living. The diversity and difficulty of the problems of large-scale planning are emphasized, as well as the fact that the solution of these problems lies in the united efforts of many varied groups. In the courses open to students of all colleges of the University the material is presented in such a manner that technical knowledge is unnecessary. Courses are also offered, however, which permit a technically trained student, graduate or undergraduate, to further his knowledge and abilities in the field of his special interest.

**Principles of Regional and City Planning*

710. First term. Credit three hours. Registration limited to 50. Open to graduates and upperclassmen in all colleges of the University. Mr. CLARKE and Mr.

MACKESY. The history of the planning of communities, including provisions for housing from ancient times to the present. A review of the basic influences in the development of cities. A general view of the theory and accepted practice of city and regional planning, including a study of the social, economic, and legal phases. Lectures, assigned reading, and examinations. Occasional lectures may be given by members of other faculties and by outside lecturers invited because of their special experience and skill in certain phases of planning. M W F 12. White 28.

**City Planning*

Practice 711. Second term. Credit three hours. Prerequisite, Course 710. Mr. CLARKE and Mr. MACKESY. The procedures and techniques of gathering and analysing data for municipal planning studies. The selection and integration of data for use in planning. Practical application of the theories of city planning. Office practice. Lectures, assigned reading, reports. M W F 12. White 28.

**Regional Planning*

Practice 712. Second term. Credit three hours. Prerequisite, Course 710. Open to graduates and upper-classmen in all colleges of the University. Mr. CLARKE and Mr. MACKESY. A study of the principles involved in county, regional, state, and national planning. Includes discussion of following factors involved: land use, water resources, recreation, transportation, public services, and public works. Lectures, assigned reading, reports, and examinations. Occasional lectures may be given by members of other faculties and outside lecturers. Hours to be arranged.

**Housing*

713. First term. Credit two hours. Registration limited. Prerequisite, Course 710. Mr. HARTELL. An introduction to the theory and standards of housing practice through analysis and comparison of various existing examples, considering the social, economic, and technical sides of the work. Lectures, assigned reading, and reports. Students in the College of Architecture will take one or more design programs having some phase of housing as subject. These programs will be substituted for a regular problem in Course 113 or 151 and values, as earned, will be awarded in those courses. Hours to be arranged. White 28. (Not given in 1940-41).

**Seminar in Regional
and City Planning*

714. Throughout the year. Credit one hour each term. Mr. CLARKE and Mr. MACKESBY. Investigation of assigned topics on particular aspects of the subject, with emphasis on either urban or regional planning. Registration limited. Open to students in all colleges of the University, by permission. This course should accompany or follow Course 710. Hours to be arranged. White, Architectural Seminar Room.

**Seminar in
Park Planning*

715. First term. Credit two hours. Mr. CLARKE. Specific problems relating to the design of city, state, and national parks, with a study of examples. Registration limited. Open to upperclassmen and graduates in the Colleges of Architecture and Engineering and others by special permission. T 8-10. White B 6.

**Seminar in Parkway, Freeway
and Highway Planning*

716. Second term. Credit two hours. Mr. CLARKE. Specific problems relating to the design of the modern parkway, freeway, and highway with study of examples. Registration limited. Open to upperclassmen and graduates in the Colleges of Architecture and Engineering. T 8-10. White B 6.

SKETCHING

SUMMER REQUIREMENT In addition to the total credit hours required for each of the several degrees administered by this college, each student is required to present, at the beginning of the third, fourth, and fifth years, a group of original summer sketches, satisfactory to the Faculty, not done under formal instruction. (These sketches are to be presented during the first week of instruction in the fall term.) Sketches are to be not less than six inches in the shortest dimension. Each group must consist of at least eight sketches if in black and white, or four if in color. They are to be suitably mounted.

MATHEMATICS The courses under this head are given in the Department of Mathematics of the College of Arts and Sciences. A make-up examination in Mathematics may be taken only with that department's permission in any case, and the permit must be obtained from the department at least one week before the time set for the examination.

College

Algebra Mathematics 2. Repeated in second term. Credit three hours. M W F 9, T Th S 9.

Plane

Trigonometry Mathematics 3. Repeated in second term. Credit three hours except for students offering Trigonometry for entrance. First term, M W F 10, T Th S 8. Second term, T Th S 10, M W F 8.

*Analytic Geometry
and Calculus*

Mathematics 8. Throughout the year. Credit three hours a term. Prerequisite, Mathematics 1, 2, 3, or the equivalent. Primarily for students of the College of Architecture. Second term, M W F 9. First term, M W F 8.

ENGLISH The course listed under this head is open to Freshmen who have satisfied the entrance requirements in this subject. It is a training in the reading and writing of English. All who elect this group must apply for assignment to sections, in the first term at the Drill Hall, in the second term at Goldwin Smith A. Registration is in charge of Assistant Professor TENNEY.

Introductory Course in

Composition and Literature English 2. Throughout the year. Credit three hours a term. May not be entered the second term. Messrs. TENNEY, GUSTAFSON, JONES, LIPA, MAURER, MOORE, MYERS, SALE, THOMPSON, WIENER, E. C. WILSON, L. C. WILSON, and others. M W F 8, 9, 10, 11, 12; T Th S 8, 9, 10, 11. Rooms to be announced.

Introductory Course in

Composition and Literature English 2 a. A repetition of the first term of English 2. T Th S 8. Goldwin Smith 156.

PHYSICS

Introductory Physics Physics 3. First term. Credit three hours. Demonstration lectures, M F 9 or 11. *Rockefeller* A. Professor HOWE. One laboratory period a week, as arranged. *Rockefeller* 220. Laboratory fee, \$5. One recitation period a week, as arranged, required of students who do not offer entrance physics, but

open to others. Professor HOWE; Assistant Professor BACHER, and Messrs. BARODY, BOCK, CONNELLY, GREISEN, McCUE, PARKER, and RANDALL.

Mechanics, properties of matter, sound, and heat.

Introductory

Physics Physics 4. Second term. Credit three hours. (See also course 6.) A continuation of course 3. Prerequisite, course 3 or entrance physics. Lectures, M F 9 or 11. Assistant Professor BACHER. Laboratory staff as in course 3. Laboratory fee, \$5.

Electricity, magnetism, and light.

CHEMISTRY

General Chemistry Chemistry 102. Throughout the year. Credit three hours a term. Both terms of the course must be completed to obtain credit unless the student is excused by the department. Open only to those students who do not offer entrance chemistry. Deposit, \$11 each term. Professor BROWNE, Professor LAUBENGAYER, and assistants. Lecture: Th or F 11, *Main Lecture Room, Baker*. Recitation: one hour a week, to be arranged. Laboratory: M T W Th or F 1:40-4.

This course deals with the fundamental laws and theories of chemistry and the properties of the more common elements and their compounds.

General

Chemistry Chemistry 104. Throughout the year. Credit three hours a term. Both terms of the course must be completed to obtain credit unless the student is excused by the department. Prerequisite, entrance credit in chemistry. Deposit, \$11 each term. Professor PAPISH and assistants. Lecture: M or T 11, *Main Lecture Room, Baker*. Recitation: one hour a week, to be arranged. Laboratory: M T W Th or F 1:40-4.

This course deals with the fundamental laws and theories of chemistry and the properties of the more common elements and their compounds.

ANATOMY

Anatomy for Artists Course 24. Throughout the year. Credit three hours a term. Professor PAPEZ. A study of the bones, muscles, and other structure that affect the surface form and the posture. Lecture, Th 12. Drawing period six hours a week; hours to be arranged. Given in alternate years. Will not be given in 1940-41.

PLANT

MATERIALS The courses listed under this head are given in the Department of Floriculture and Ornamental Horticulture of the New York State College of Agriculture.

Woody Plant

Materials 8. First and second terms. Credit two or four hours a term. Intended for advanced and graduate students. Registration by permission of the department. Lecture, T.Th 9. Plant Science 37. Laboratory and field trips, M and either W or F 1:40-4. Plant Science 29. Professor R. W. CURTIS and Mr. PRIDHAM.

A study of the trees, shrubs, and vines used in landscape planting and in nursery work. All members of the class will be required to participate in two excursions to the Rochester parks, one in each term. Laboratory fee, \$4.

Herbaceous

Plant Materials 3 a. Second term. Credit two hours. Lecture, T 8. Plant Science 37. Practice, T or Th 1:40-4. Plant Science 15 and gardens. Dr. ALLEN and MESSRS. WHEELER and BOICOURT.

A study of the ornamental herbaceous plants used in landscape and garden plantings. Emphasis is placed on the identification and use of spring and early summer flowering perennials. All members of the class are required to participate in an excursion to Rochester parks and gardens. Laboratory fee, \$4.

Herbaceous

Plant Materials 3 b. First term. Credit one hour. Prerequisite, Course 3 a. Practice, W 10-12 or F 11-1. Plant Science 15 and gardens. Dr. ALLEN and MESSRS. WHEELER and BOICOURT.

A continuation of course 3 a dealing with annuals and late summer and fall flowering perennials. Principles of the arrangement of herbaceous plants are studied. Laboratory fee, \$2.

ENGINEERING The courses listed under this head are given in the School of Civil Engineering. Some of them, as will be noted, are designed primarily for students of Architecture, Landscape Architecture, or Regional and City Planning.

Elementary

Surveying C.E. 110. Required of students in Civil Engineering. Either term as assigned. Credit three hours. Use of steel tape, level, and transit; fundamental surveying methods; measure-

ments of lines, angles, and differences of elevation; land surveying, areas, and plotting. First term, one recitation and two field, computation, or mapping periods a week; second term, three recitation periods a week for the first six weeks and three field, computation, or mapping periods a week during the remainder of the term. Textbook: Breed and Hosmer's *Elementary Surveying*. Professor UNDERWOOD, Assistant Professor LAWRENCE, and Mr. SPRY.

Elementary

Surveying C.E. 111. Required of students in Mechanical and Electrical Engineering. Either term as assigned. Credit two hours. Use of steel tape, level, and transit; fundamental surveying methods; measurement of lines, angles, and differences of elevation; land surveying. First term, two recitations or two field or computation periods a week; second term, two recitations a week during the first half of the term, and two field or computation periods a week during the remainder of the term. Textbook: Breed and Hosmer's *Elementary Surveying*. Professor UNDERWOOD, Assistant Professors LAWRENCE, CRANDALL, and THATCHER, and Mr. SPRY.

Advanced

Surveying C.E. 212. For students in Landscape Architecture. First term. Credit two hours. Prerequisite, Elementary Surveying 110 or 111. Profile leveling; cross-sectioning; earthwork; circular curves and spirals; vertical curves. Recitations, computation and field work. Textbook: Breed & Hosmer's Vol. I. Assistant Professor LAWRENCE.

Advanced

Surveying C.E. 212 A. For students in Landscape Architecture. Second term. Credit two hours. Prerequisite, Elementary Surveying 110 or 111. Topographic surveying; transit and stadia methods; plane table; survey plotting. Triangulation. Recitations, computations, and field work. Textbook: Breed and Hosmer's Vol. I. Assistant Professor LAWRENCE.

Materials

Laboratory C.E. 226. Juniors. Either term. Credit three hours. Prerequisite course, Architecture 210 and must be taken with or preceded by C.E. 280. Experimental determination of the properties of materials by mechanical tests. Study of testing machines (their theory, construction, and manipulation); calibration of testing

machines and apparatus; commercial tests of iron and steel; tensile, compressive, torsional, shearing, and flexure tests of metal and various woods and stress-strain observations; tests of cement, concrete aggregate, concrete, plain and reinforced, and of road material and paving brick. The course is planned to supplement Course 225 with its study of the properties of materials by the actual handling of the materials and by observation of their behavior under stress. Laboratory work two 2½ hour periods a week. PROFESSOR SCOFIELD, ASSISTANT PROFESSOR COYKENDALL, and Dr. HAWKINS.

Testing of Materials C.E. 227. (Laboratory.) Second term. Credit one hour. Prerequisite, Mechanics 210. Given especially for students in the College of Architecture. A brief course in laboratory methods comprising test of beams and columns in steel, wood, and concrete. PROFESSOR SCOFIELD.

Highway Engineering C.E. 265. Required of all Civil Engineering seniors. Elective for certain graduates. Either term. Credit three hours. Prerequisite, Courses 260 A and 260 B. The course consists of lectures and recitations considering the economic selection of routes, economics of location, modern tendencies in design and practice, subgrade soils, drainage, subgrade stabilization, finance, and the technique of construction and maintenance of flexible and rigid types of pavement. In addition to the class work a problem is assigned which requires a complete redesign for modern traffic conditions of an old highway. PROFESSOR CONWELL.

Modern Highway Planning and Design C.E. 268. Elective. Seniors and graduate students. Second term. Credit three hours. Prerequisite, Course 265 or its equivalent. Study of geographical, political, and economic divisions of communities with particular reference to highway transportation requirements; analysis of regional plans chiefly concerning the classification of roads and the selection of routes to be abandoned or improved, based upon their economic justification. Design of regional systems of highways, freeways, and parkways, including the consideration of the economic, safety, and aesthetic aspects. Traffic studies, legislation, financing, and zoning. Design of intersections and grade separations. Problems and reports required. PROFESSORS CLARKE and CONWELL.

Concrete

Construction C.E. 280 A. For architects. First term. Credit three hours. Prerequisites, Arch. 210 and 211, or C.E. 220 and 221. (Students who have taken C.E. 220 and 221 may substitute 280 for 280 A). Properties of plain concrete, elementary theory of reinforced concrete as applied to beams and slabs, columns, footings, and retaining walls. Textbook: Urquhart and O'Rourke's "Design of Concrete Structures." Three 2-hour periods a week. Professors URQUHART and O'ROURKE and Assistant Professor PENDLETON.

Foundations

C.E. 281. Juniors and Seniors. Either term. Credit three hours. Prerequisite, Courses 220 and 221. Piles and pile driving, including timber, concrete, tubular, and sheet piles; cofferdams; box and open caissons; pneumatic caissons for bridges and buildings, caisson sinking, and physiological effects of compressed air; pier foundations in open wells; freezing process; hydraulic caissons; ordinary bridge piers; cylinders and pivot-piers; bridge abutments; spread footings for building foundations; underpinning buildings; subterranean explorations; unit loads. Textbook: Jacoby and Davis's *Foundations of Bridges and Buildings*. Recitations, collateral reading in engineering periodicals, and illustrated reports. Three hours a week. Professors URQUHART and O'ROURKE.

Reinforced Concrete

Design C. E. 285. Elective. Seniors and graduates. Either term. Credit three hours. Prerequisite, Course 280. Theory and design of gravity, cantilever, and counterfort retaining walls. Design of footings: single and multiple columns of reinforced concrete, I-beam grillages. Design of bins and tanks, subsurface and supported on towers. Reports and sketches. Three two-hour periods a week. Professors URQUHART and O'ROURKE.

Engineering

Law C.E. 290. Seniors. Juniors admitted only by special permission of the Faculty. Also open to Seniors in Architecture, Mechanical, Electrical, and Chemical Engineering, and to other Seniors submitting acceptable qualifications. Either term. Credit three hours. Basic essentials of contracts and contract principles; agency, tort and independent contractor; laws regulating acquisition, use and conveyance of lands and waters, including irrigation law, real estate documents, boundary lines, wills, eminent

domain and title searches; corporations, partnerships and other contracts of association; sales and transportation contracts; negotiable instruments; bankruptcy, mechanics liens, patents, trademarks, copyrights, courts, and laws of insurance. The course culminates with the preparation of a set of contract documents for an assigned construction job, including advertisement, surety bond, form of proposal, information to bidders, agreement form, general conditions and specifications with full discussion of important clauses such as payments, time limit, arbitration, extras, liquidated damages and abandonment of contract. Tucker's *Contracts in Engineering* is used as a text, supplemented liberally from other sources. Lectures and recitations. Three hours a week. Professor BARNES and Assistant Professors CRANDALL, PERRY, and THATCHER.

UNIVERSITY REQUIREMENTS

HYGIENE AND PREVENTIVE MEDICINE Every entering student is required to report at the Medical Adviser's office during the registration days of the first term to make an appointment for a physical examination. There will be repeated periodical examinations if the first or a subsequent examination indicates the need of them. Seniors are required to make an appointment for a physical examination during the regular registration days of their last term of residence. All students in the first year of undergraduate courses are required to attend a lecture-recitation course in Hygiene and Preventive Medicine given once a week throughout the year, as follows:

Hygiene

1 and 2. First and second terms. Required of all Freshmen. Credit one hour a term. One lecture-recitation each week, with preliminary examination and final each term. The use of a textbook will be required. Students must report each term for registration and assignment to section, in the first term at the Drill Hall and in the second term at the men's and women's gymnasiums respectively. Sections for men: Professor SMILEY and Assistant Professors GOULD, SHOWACRE, and DEYOE. Sections for women: Assistant Professors EVANS and CUYKENDALL and Dr. STEBLE.

MILITARY SCIENCE

AND TACTICS Basic Course. Throughout the year. The complete course covers two years. Three hours a week, either M T W or Th, 1:40-4 P.M. Required of all able-bodied first and

second year male students of the College of Architecture who are American citizens and candidates for a baccalaureate degree. The requirements of Military Science and Tactics must be completed in the first terms of residence; otherwise the student will not be permitted to register again in the University without the consent of the Faculty. Students who are officially relieved of the requirement in Military Science and Tactics are subject to the requirement of an equivalent period of work in the Department of Physical Education. The course of training is that prescribed by the War Department for Senior Division Units of the Reserve Officers' Training Corps for basic students. Instruction is offered in Infantry and Field Artillery. For details see the Announcement of the Department of Military Science and Tactics. *Advanced standing:* With the approval of the Department of Military Science and Tactics, credit may be allowed a student for all or part of the Basic Course requirement, upon presentation of evidence of satisfactory work completed at an approved institution.

PHYSICAL EDUCATION

FOR WOMEN Required of first and second year candidates for baccalaureate degrees. Throughout the year. Three periods a week. The requirements must be completed in the first terms of residence; otherwise the student will not be permitted to register again in the University without the consent of the Faculty. The program consists of six weeks of outdoor sports in fall and spring; indoor classes in badminton, basketball, fencing, dancing (folk, tap, and modern), golf, gymnastic games, individual gymnastics, riflery, swimming, and tennis. Misses BATEMAN, ASHCROFT, ATHERTON, BARROW, and THORIN.

