

CONTENTS

Faculty.....	2
Historical Sketch.....	3
Professional Courses.....	4
Entrance Requirements.....	6
The College's Equipment.....	7
University Privileges.....	7
Fellowships and Scholarships.....	8
Medals and Prizes.....	9
Graduate Study.....	11
Courses of Study Leading to Degrees.....	12
Bachelor of Architecture.....	12
Bachelor of Landscape Architecture.....	14
Bachelor of Architecture and Master of Landscape Architecture...	16
Bachelor of Fine Arts.....	18
Regional and City Planning and Housing.....	20
Courses of Instruction.....	22
Design.....	22
Theory of Construction.....	23
Painting and Sculpture.....	24
History of the Fine Arts.....	27
Graphics.....	29
Applied Construction.....	29
Regional and City Planning; Housing.....	30
Industrial Design.....	31
Mathematics.....	32
English.....	32
Plant Materials.....	32
Engineering.....	33
University Requirements.....	35

FACULTY

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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.
JOHN NEAL TILTON, JR., M.Arch., A.I.A., Professor of Architecture.
JOHN A. HARTELL, B.Arch., Professor of Architecture. In charge of
instruction in Fine Arts.
FREDERICK O. WAAGE, Ph.D., Professor of the History of Art and
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A. HENRY DETWEILER, B.Arch., A.I.A., Associate Professor of Architec-
ture and Secretary of the Faculty.
FREDERICK M. WELLS, B.Arch., A.I.A., Associate Professor of Archi-
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LUDLOW D. BROWN, M.Arch., Associate Professor of Architecture.
KENNETH L. WASHBURN, M.F.A., Associate Professor of Fine Arts.
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NORMAN D. DALY, B.F.A., M.A., Assistant Professor of Fine Arts.
JOSEPH M. HANSON, A.M.C., Assistant Professor of Fine Arts.
THOMAS H. CANFIELD, B.S. in Arch., Assistant Professor of Architecture.
ROBERT P. LANG, A.B., M.A., B.S., Secretary of the College and In-
structor in Fine Arts. Curator of the Chapman Print Collection.
GEORGE F. CHISHOLM, A.B., Instructor in Fine Arts.
JOHN S. MYERS, B.Arch., Instructor in Architecture.
KENNETH EVETT, A.B., M.A., Instructor in Fine Arts.
JOHN W. REPS, A.B., M.R.P., Lecturer in City Planning.

-
- VIVIAN F. ENGELBRECHT, A.B., B.L.S., Librarian.
MARION B. DAVIS, Assistant in the Library.
MONICA M. FULLER, Assistant Secretary of the College.

THE COLLEGE OF ARCHITECTURE

AT CORNELL from the first there was a place in the university system for a school of Architecture. Although this University owes its foundation to the Federal and State governments and Ezra Cornell, it 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 recognition of a department of architecture as an integral part of a university was a new and bold concept.

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 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 for a period of five years (1935–1939 inclusive) 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 an active faculty of twenty-two and at present enrolls about 200 students. Teachers and students in such a proportion mix together freely and instruction and criticism is on an individual basis.

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 others 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 several professional degrees: in Architecture to the degrees of Bachelor of Architecture (B.Arch.) and Master of Architecture (M.Arch., Graduate School); in Landscape Architecture to that of Bachelor of Landscape Architecture (B.L.A.) and Master of Landscape Architecture (M.L.A., Graduate School); in Art to that of Bachelor of Fine Arts (B.F.A.) and Master of Fine Arts (M.F.A., Graduate School); and in Regional and City Planning to that of Master in Regional Planning (M.R.P., Graduate School). Typical courses of study are described and analyzed on pages 12-21.

The normal period of the undergraduate course of study in architecture and landscape architecture is five years (based on two terms each calendar year in the normal curriculum), although a student with exceptionally thorough preparation may satisfy the requirements for the degree in somewhat less time. Some students who have entered the college after taking an A.B. or B.S. degree have earned the professional degree in four years. The course of study in Fine Arts is four 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, as 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 upon the student's ability as indicated by his scholastic record. Crowding of the student's work, however, is disapproved because the time element alone is important in 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 stu-

dent 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. . . . Students in each of the professional courses of study profit by their daily association in the drafting rooms and studios. A close correlation exists between the courses of Architecture and Landscape Architecture; much of the instruction, including all the work of the first two years, is the same in both. From time to time there are problems in design requiring the formal collaboration of architect, landscape architect, painter and sculptor. Students in Architecture, Landscape Architecture, and Regional and City Planning work together in the drafting rooms, often under the same instruction, with the professors of each department constantly in touch with the students of the other.

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 the adviser's supervision and the Faculty will grant him periodical credit commensurate with his progress.

THESIS. . . . The satisfactory completion of a thesis is required of every candidate for the bachelor's degree in Architecture or Landscape Architecture and of every candidate for an advanced degree. The thesis must be completed during the last term of residence. It consists 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 proficiency in his particular field of study.

ENTRANCE REQUIREMENTS

ADMISSION TO THE COLLEGE... The entrance requirements of the College of Architecture are to be found in *General Information*, published by the University. 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.

Veterans are advised to consult the Director of Veterans Education, Cornell University, Ithaca, N. Y.

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 fall term or, if a satisfactory schedule can be arranged, at the beginning of the spring 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... Special students are of two classes, as follows:

(1) A person, especially one of comparative maturity, may, in certain circumstances, even without satisfying the entrance requirements, be admitted as a special student not a candidate for a degree. The applicant must give evidence of ability to do creditable work in the College and his application for admission must be recommended by the department in which he proposes to do the main part of his work. He must file his application with the Director of Admissions.

If a person admitted as a special student without satisfying the entrance requirements subsequently satisfies those requirements, he may be graduated under the ordinary regulations of the College. He will not be permitted, however, to make up deficiencies in entrance subjects by attending University instruction in those subjects.

Special students in the College of Architecture must be at least twenty-one years of age.

(2) A person who already holds a baccalaureate degree and wishes to pursue further work at the undergraduate level may also apply for admission as a special student, regardless of the age requirements stated above. Such a student must have had adequate preparation for the pro-

gram contemplated and must secure the approval of the College. He must file his application with the Director of Admissions.

EQUIPMENT

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

LIBRARIES. . . The College's library comprises more than 11,000 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 45,000. 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 intra-mural 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 provides for the medical examination and advising of students, and maintains a clinic

and an infirmary, with a regular staff of physicians, for the care of students in case of illness. All these provisions are fully described 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* booklet. 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 allow one-half tuition for two terms of the first year. 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 have a value of \$300 a year.

Gillespie Prize Scholarships. Two scholarships of \$400 each may be awarded each year to fourth or fifth year students in architecture. These awards are made from the bequest to the College of the late Albert D. Gillespie, '87 (Sp.), and are granted on the basis of general academic performance and need.

Robert James Eidlitz Fellowship. Graduate fellowships in Architecture, valued at approximately \$1200, provide for exceptionally promising graduates of this College, 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.

Fellowships of the American Academy in Rome. Fellowships 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 total value of each fellowship amounts to about \$3000. Graduates of this College are eligible to compete for these fellowships.

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

tion 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.

Graduate Scholarships. One or more awards giving free tuition in the Graduate School may be awarded annually for graduate study in Architecture, Landscape Architecture, Regional or City Planning, or the Fine Arts.

University Fellowships. One or more awards of \$400 with free tuition may be made annually for graduate study in Architecture, Landscape Architecture, Regional and City Planning, or the Fine Arts.

The Phi Kappa Phi Scholarship. Established by the Cornell chapter of the society of Phi Kappa Phi and 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 leaflet on scholarships which may be obtained by writing to Cornell University Official Publication, 124 Roberts Place, Ithaca, N. Y.

MEDALS AND PRIZES

The Charles Goodwin Sands Memorial Medal, founded in 1900 by the family of Charles Goodwin Sands of the Class of 1890, may be awarded for work of exceptional merit done by any student whose major work is in the College of Architecture.

In the case of work in collaboration a medal may be awarded to each member of a team or to one or more members whose work is particularly outstanding.

Two grades of this medal, the silver and the bronze, are recognized. Winners of the Rome Prize in Architecture and Landscape Architecture are usually awarded the silver Sands Medal.

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 106, 107, 108 and 109; or 152, 153, 154 and 155. 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.

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 Mrs. George A. Shedden 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 Edwin A. Seipp Memorial Prizes, one of \$50 and one of \$25, were established in 1948 by Mrs. E. A. Seipp in memory of her husband, an alumnus of the Class of 1905. They are awarded as first and second prizes in a special competition in Design.

The Baird Prizes, one of \$25 and one of \$15, are awarded as first and second prizes in a special sketch problem competition in fourth and fifth-year Design, Courses 106–109 inclusive. The problem, lasting six days, is given during the early part of the second term and is of a decorative nature. The fund, established in 1927, was 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 and Junior Design, Courses 102–105 inclusive, and Courses 150–151. The problem, lasting approximately one week, is given in the second term.

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.

GRADUATE STUDY

The Graduate School of Cornell University offers the degrees of Master of Architecture (M.Arch.), Master of Landscape Architecture (M.L.A.), Master of Fine Arts (M.F.A.), and Master in Regional Planning (M.R.P.).

The requirements for advanced degrees are based 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 the M.Arch., M.L.A., M.F.A., or M.R.P. degree, 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 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.

The degree of Master of Architecture is awarded upon successful completion of a plan of study prepared in consultation with a Faculty Committee. The student may engage in advanced work in architectural design, in the history of architecture, or in construction.

The degree of Master of Landscape Architecture is awarded upon successful completion of a plan of study prepared in consultation with a Faculty Committee. A specified curriculum, described on pages 16–17, is offered for those students who wish to pursue a course of study leading to the degree of Bachelor of Architecture at the end of five years and to that of Master of Landscape Architecture after one additional year.

The degree of Master in Regional Planning is offered to students who satisfactorily meet the requirements set forth on pages 20–21.

A general statement concerning the requirements for the degree of Master of Fines Arts will be found on page 18.

Students preparing themselves for the teaching of art in the elementary or secondary schools may become candidates for the degree of Master of Education (M.Ed.), administered by the School of Education under the jurisdiction of the Graduate School. For further information, consult the *Announcement of the School of Education*.

COURSES OF STUDY

The following pages are devoted to a description and analysis of the several courses of study which the College offers—some of them in conjunction with other university divisions—looking to professional training in Architecture, Landscape Architecture, Regional and City Planning, or the Fine Arts.

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 Military Science and Tactics and Physical Education. The "hour," as a unit of requirement, represents attendance once a week in lecture or recitation, or in a laboratory exercise or drafting room period ordinarily lasting two and one-half hours.

Every student must register in each term for at least 12 hours; no student may register for more than 18 hours in any one term except by permission and such permission will normally not be granted before a student's third year. In addition to Physical Training and Military Science, a student on probation may not register for more than 15 hours.

BACHELOR OF ARCHITECTURE

The courses of study which lead to the degree of Bachelor of Architecture are designed to afford both the technical and the cultural foundation for professional work. They recognize the dependence of the profession of architecture not only upon technical skill but also upon a cultivated taste and a creative imagination. They emphasize the architect's obligation to society as well as to the client.

The architect today must be a person of many talents. He must be an artist and an engineer, an administrator, and a coordinator of the work of experts in many fields. Above all, he should have a broad understanding of fundamental human values and problems.

The five-year, ten-term curriculum in Architecture outlined on the following page includes a thorough training in the basic skills and intellectual disciplines needed by the architect. The main body of courses 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 addition, the student is expected to enlarge his understanding of the liberal arts and sciences through elective courses chosen in consultation with his faculty adviser. Opportunity is also provided for the student to strengthen his architectural training through the selection of additional courses in such areas as construction, regional and city planning, or the fine arts.

BACHELOR OF ARCHITECTURE CURRICULUM

		HOURS	
		<i>First</i>	<i>Second</i>
		<i>Term</i>	<i>Term</i>
FIRST YEAR	Architectural Design, 100, 101.....	3	3
33 Hours	Descriptive Geometry, 500, 501.....	4	3
	Drawing and Painting, 310, 311.....	3	3
	English Composition, 111, 112.....	3	3
	Analytic Geometry and Calculus, 171, 172.....	3	3
SECOND YEAR	Architectural Design, 102, 103.....	4	4
32 Hours	Mechanics, 200, 201.....	3	3
	History of Architecture, 404, 405.....	3	3
	Drawing and Painting, 312.....	3	0
	Sculpture, 330.....	0	3
	Electives	3	3
THIRD YEAR	Architectural Design, 104, 105.....	4	4
32 Hours	Structural Design, 202, 203.....	3	3
	History of Architecture, 406, 407.....	3	3
	City Planning, 710.....	3	0
	Materials and Construction, 601.....	0	3
	Electives	3	3
FOURTH YEAR	Architectural Design, 106, 107.....	5	5
34 Hours	Materials and Construction, 602.....	3	0
	Working Drawings, 604.....	3	0
	Concrete Construction, C. E. 2715.....	3	0
	Drawing and Painting or Sculpture.....	0	3
	History of Architecture, 408.....	0	3
	Specifications, 605.....	0	3
	Electives	3	3
FIFTH YEAR	Architectural Design, 108.....	10	0
31 Hours	Thesis, 109.....	0	10
	Modern Architecture, 409.....	2	0
	Building Structure, 206.....	1	0
	Professional Practice, 621.....	0	2
	Electives	3	3

The University requirements in Military Science and Tactics and Physical Education must be met in addition to the courses listed.

At least half of the elective requirement should be chosen from liberal and non-technical courses offered in other divisions of the University. On approval of the Dean, special programs of elective work may be arranged to meet the needs of individual students.

BACHELOR OF LANDSCAPE ARCHITECTURE

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, 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 curriculum leading to the degree of Bachelor of Landscape Architecture puts emphasis on a correlative study of Architecture as a help in training of the student's aesthetic judgment and 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 land, 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, including work related to the planning of cities, towns, housing developments, parks, parkways, and expressways. The student is encouraged also to make use of the courses of study in Regional and City Planning.

Attention is invited to the six-year course of study which leads to the degree of Bachelor of Architecture at the end of five years and to the degree of Master of Landscape Architecture at the end of one additional year. This course of study is recommended for those who expect to enter the profession of Landscape Architecture where a license to practice is desirable. In this manner the student of landscape architecture is given the basic educational requirements necessary to obtain a professional license for the practice of architecture.

The Faculty believes that the best program of instruction for those who aim to practice landscape architecture is the course of study leading to two degrees, Bachelor of Architecture and Master of Landscape Architecture. This course of study normally extends over a period of six years. A tentative program for the course of study leading to the two degrees is shown on page 17.

BACHELOR OF LANDSCAPE ARCHITECTURE
CURRICULUM

		HOURS	
		<i>First</i>	<i>Second</i>
		<i>Term</i>	<i>Term</i>
FIRST YEAR 33 Hours	Architectural Design, 100, 101.....	3	3
	Descriptive Geometry, 500, 501.....	4	3
	Drawing and Painting, 310, 311.....	3	3
	English Composition, 111, 112.....	3	3
	Analytic Geometry and Calculus, 171, 172.....	3	3
SECOND YEAR 32 Hours	Architectural Design, 102, 103.....	4	4
	Mechanics, 200, 201.....	3	3
	History of Architecture, 404, 405.....	3	3
	Drawing and Painting, 312.....	3	0
	Sculpture, 330.....	0	3
	Electives	3	3
THIRD YEAR 33 Hours	Landscape Design, 150, 151.....	4	4
	History of Architecture, 406, 407.....	3	3
	Elementary Surveying, C. E. 2101.....	3	0
	Advanced Surveying, C. E. 2102.....	0	3
	Plant Materials, Flor. 10.....	3	0
	Woody-Plant Materials, Flor. 13.....	0	4
	Electives	3	3
FOURTH YEAR 33 Hours	Landscape Design, 152, 153.....	5	5
	City Planning, 710.....	3	0
	History of Landscape Architecture, 450.....	3	0
	Route Surveying, C. E. 2601.....	3	0
	Soil Mechanics, C. E. 2725.....	0	3
	History of Architecture, 408.....	0	3
	Planting Design, 650.....	0	2
	Electives	3	3
FIFTH YEAR 31 Hours	Landscape Design, 154.....	6	0
	Thesis, 155.....	0	8
	Landscape Construction, 660.....	3	0
	Planting Design, 651.....	2	0
	Highway Engineering, C. E. 2610.....	3	0
	Herbaceous Plant Materials, Flor. 12.....	0	3
	Electives	3	3

The University requirements in Military Science and Tactics and Physical Education must be met in addition to the courses listed.

BACHELOR OF ARCHITECTURE AND • MASTER OF LANDSCAPE ARCHITECTURE

A course of study is offered leading to the degree of Bachelor of Architecture at the end of five years and to that of Master of Landscape Architecture after one additional year. The student need not indicate his intention to pursue this course until the end of his second year, for his work up to that time is the same as that of the first two years of the course in architecture.

Experience has proved that a practitioner of either of these professions can profit from a knowledge of the theory and practice of the other. This course is designed to give the student the fundamental training needed for the practice of either profession. His choice can depend upon his own particular aptitude or preference. A graduate of this course who chooses to practice landscape architecture will have met the educational requirements for registration as an architect in states which have registration laws.

For the courses of instruction of the first two years see the table on page 15. The succeeding courses are given on the next page.

BACHELOR OF ARCHITECTURE AND MASTER OF
LANDSCAPE ARCHITECTURE CURRICULUM

		HOURS	
		<i>First</i>	<i>Second</i>
		<i>Term</i>	<i>Term</i>
THIRD YEAR 32 Hours	Architectural Design, 104.....	4	0
	Landscape Design, 151.....	0	4
	Structural Design, 202, 203.....	3	3
	History of Architecture, 406, 407.....	3	3
	City Planning, 710.....	3	0
	Materials and Construction, 601.....	0	3
	Elementary Surveying, C. E. 2101.....	3	0
	Advanced Surveying, C. E. 2102.....	0	3
FOURTH YEAR 35 Hours	Architectural Design, 106.....	5	0
	Landscape Design, 152.....	0	5
	Materials and Construction, 602.....	3	0
	Working Drawings, 604.....	3	0
	Concrete Construction, C. E. 2715.....	3	0
	Plant Materials, Flor. 10, 13.....	3	4
	History of Architecture, 408.....	0	3
	Specifications, 605.....	0	3
	Elective	0	3
FIFTH YEAR 32 Hours	Architectural Design, 108.....	6	0
	Landscape Design, 153.....	4	0
	Thesis, 109.....	0	10
	Modern Architecture, 409.....	2	0
	Building Structure, 206.....	1	0
	Route Surveying, C. E. 2601.....	3	0
	Professional Practice, 621.....	0	2
	Soil Mechanics, C. E. 2725.....	0	3
(Degree: Bachelor of Architecture)			
SIXTH YEAR 33 Hours	Landscape Design, 154.....	6	0
	Landscape Thesis, 155.....	0	8
	History of Landscape Architecture, 450.....	3	0
	Landscape Construction, 660.....	3	0
	Planting Design, 650, 651.....	2	2
	Highway Engineering, C. E. 2610.....	3	0
	Herbaceous Plant Materials, Flor. 12.....	0	3
	Elective	0	3

(Degree: Master of Landscape Architecture)

BACHELOR OF FINE ARTS

The course of study leading to the degree of Bachelor of Fine Arts offers an opportunity for the student to obtain a general college education with the practice of painting or sculpture as the major field of study. The courses which constitute the major subject are designed to promote a knowledge and critical understanding of these arts through a study of their formal aspects and of their place in the societies of the past and present, as well as to develop the individual student's talent in the practice of the art he chooses to concentrate upon. Approximately half of the student's time throughout the four-year course is spent in these studies, while the remainder is occupied by a well-rounded program of academic subjects. Ample opportunity is provided for the student to elect additional work in the subjects which are of particular interest to him.

Students who wish to pursue further studies upon successful completion of this course may apply for admission to the Graduate School as candidates either for the degree of Master of Fine Arts or for the Degree of Master of Education.

MASTER OF FINE ARTS

The additional two years of study required for the completion of work leading to the degree of Master of Fine Arts provide intensive training in the practice of painting or sculpture, through which the talented student may prepare himself for a professional career. The history and theory of art will normally be the minor field of study.

MASTER OF EDUCATION

The degree of Master of Education is conferred upon successful candidates after one additional year of study. The student attaining this degree will qualify for a certificate as a teacher of art in the elementary and secondary schools under the regulations of the New York State Department of Education.

BACHELOR OF FINE ARTS CURRICULUM

		HOURS	
		<i>First</i>	<i>Second</i>
		<i>Term</i>	<i>Term</i>
FIRST YEAR	Painting and Composition, 300, 301.....	3	3
30 Hours	Figure Construction, 340, 341.....	3	3
	Introduction to Art, F. A. 101, 102.....	3	3
	English Composition, 111, 112.....	3	3
	Science	3	3
SECOND YEAR	Painting and Composition, 302, 303.....	3	3
30 Hours	Sculpture, 330, 331.....	3	3
	Arts of Design, 350.....	3	0
	Problems of Painting, 353.....	0	3
	History of Art or Architecture.....	3	3
	History	3	3
THIRD YEAR	Painting and Composition, 304, 305.....	5	5
34 Hours	Methods and Materials, 354.....	3	0
	Painting Technics, 322.....	0	3
	History of Art or Architecture.....	0	3
	Foreign Language.....	6	0
	Electives	3	6
FOURTH YEAR	Painting and Composition, 306, 307.....	5	5
34 Hours	Figure Composition, 342, 343.....	3	3
	Electives	9	9

The University requirements in Military Science and Tactics and Physical Education must be met in addition to the courses listed.

Students who wish to major in Sculpture will substitute Methods and Materials of Sculpture 356 and Sculpture Technics 326 for Painting Technics 322 and Methods and Materials of Painting 354. Beginning with the third year, twenty hours of studio work in Sculpture 332, 333, 334, 335 will be substituted for Painting and Composition 304, 305, 306, 307.

REGIONAL AND CITY PLANNING AND HOUSING

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. 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.

Instruction in Regional and City Planning and in Housing is given by the Colleges of Architecture and Engineering in cooperation. The courses of study are described on pages 30-31. They are open to students in Architecture, Landscape Architecture, Engineering, Government, Economics, Sociology, Geography, Agricultural Economics, and to upperclassmen otherwise prepared to profit by an understanding of the problems that they deal with.

Students in 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 in the College of Architecture may also take a problem in planning or in housing as the subject of his thesis.

MASTER IN REGIONAL PLANNING

The degree of Master in Regional Planning is offered to students registered in the Graduate School who major in Regional and City Planning. Students with a background in architecture, landscape architecture, engineering, economics, sociology, geography, government, or agricultural economics may be accepted as candidates for the degree of Master in Regional Planning. Those who have had substantial academic work in planning as undergraduates, equivalent to the courses given in the Department of Regional and City Planning at Cornell, will ordinarily earn the master's degree in one year. Those who have not had this preparation will normally require two years to gain the degree. Each student majors in Regional and City Planning, with special emphasis on the particular relationship the field of study which he pursued as a undergraduate has to planning. Thus, a graduate in architecture will approach planning from his specialized background

while acquiring a full knowledge of the manner in which the architect, the landscape architect, the public administrator, the economist, the sociologist, the geographer, the lawyer, and those in other related professions, fit into the planning program.

Many related courses given in other departments of the University are open to students.

While the course of study is adapted to the previous academic training and experience of the individual student, a somewhat typical program is given below. Normally, those students whose background is in the design professions, i.e., architecture, landscape architecture, or engineering, concentrate on the problems of design in the first year; others spend equivalent time in research.

TYPICAL MASTER IN REGIONAL PLANNING CURRICULUM

		HOURS
FIRST TERM	City Planning Design 718 or Research 719	8
	Principles of City and Regional Planning, 710.....	3
	History of City Planning, 700.....	3
	Public Administration, Gov. 231.....	3
SECOND TERM	City Planning Design 718 or Research 719.....	9
	City Planning Practice, 711.....	3
	Zoning, 717.....	2
	Land Economics, Ag. Ec. 181.....	3
THIRD TERM	City Planning Research, 719.....	9
	Housing, 713.....	2
	Introduction to Statistics, Soc. 702.....	3
	Urban Society, Soc. 412.....	3
FOURTH TERM	City Planning Research, 719.....	12
	Conservation of Natural Resources, For. 3.....	2

COURSES OF INSTRUCTION

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.

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.

The time and place of each course of study and the name of the instructor will be given in a separate memorandum at the beginning of each term.

DESIGN

Instruction in Architectural and Landscape Design is given by the Design staff — Messrs. SEYMOUR, MONTILLON, HARTELL, CLARKE, MACKESEY, WELLS, BARNETTE, CANFIELD, and MYERS — 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.

100, 101. *Introductory Design*. Two terms. Credit three hours a term. An introduction to the design and construction of buildings, considered in relation to their immediate environment. The student submits, by means of models and drawings, original solutions to a series of problems. The course begins with a study of three-dimensional abstract design and continues with a progressive sequence of small architectural compositions in a given topography. Lectures, discussions, and group and individual criticisms.

102, 103. *Intermediate Design*. Two terms. Credit four hours a term. Prerequisite, Course 100 and 101.

104, 105. *Junior Design*. Two terms. Credit four hours a term. Prerequisite, Course 102 and 103.

106, 107. *Senior Design*. Two terms. Credit five hours a term. Prerequisite, Course 104 and 105.

108. *Advanced Design*. One term. Credit ten hours. Prerequisite, Course 106 and 107.

109. *Thesis in Architecture*. One term. Credit ten hours. Prerequisite, Course 108.

119. *Elective Design*. Either term. Credit as assigned.

190. *Graduate Design*. Either term. Credit as assigned. A course for graduate students in Architecture.

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. Land and site-planning are important phases in the study of landscape design.

150, 151. *Intermediate Landscape Design*. Two terms. Credit four hours a term. Prerequisite, Course 102 and 103. Half of the work of this course is identical with that of Course 104 and 105. One lecture discussion period each week on the theory of landscape design.

152, 153. *Senior Landscape Design*. Two terms. Credit five hours a term. Prerequisite, Course 150 and 151.

154. *Advanced Landscape Design*. One term. Credit six hours. Prerequisite, Course 152 and 153.

155. *Thesis in Landscape Architecture*. One term. Credit eight hours. Prerequisite, Course 154.

THEORY OF CONSTRUCTION

These courses (200-203 and 206), together with Concrete Construction (C.E. 2715, described on page 34), deal in the beginning with the theories and progressively more with the practice of Structural Design. Instruction is given by Messrs. BAXTER and BROWN.

200. *Mechanics of Materials*. Fall term. Credit three hours. Prerequisite, Mathematics 171 and 172. Statics, simple unit stress, center of

gravity, static moment, moment of inertia, bending moment and shear in beams. Recitations.

201. *Mechanics of Materials*. Spring term. Credit three hours. Prerequisite, Course 200. Beams: bending unit stress, shearing unit stress, deformation, restraint and continuity; columns; eccentric loading and combined stress. Recitations.

202, 203. *Structural Design*. Throughout the year. Credit three hours a term. Prerequisite, Course 200 and 201. 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, 202, is a prerequisite for Concrete Construction, C.E. 2715, and for Working Drawings 604.)

206. *Building Structure*. Fall term. Credit one hour. Prerequisite, Courses 202, 203 and C.E. 2715. Lecture and computation. Analysis of the structural design for commonly used roof and floor systems, for critical structural conditions typically encountered in buildings, and for the solution of foundation and footing problems.

PAINTING AND SCULPTURE

Work in all branches of the Fine Arts is offered and may be taken by any student in the University.

Instruction is given by MESSRS. HARTELL, WASHBURN, MAHONEY, DALY, HANSON, CHISHOLM, LANG, and EVETT.

LECTURE COURSES...

350. **The Arts of Design*. Fall term. Credit three hours. A study of the interrelations of the arts of design: sculpture, painting, architecture, theatre and stage design, and various minor arts. The course will be conducted with the co-operation of staff members of the Department of Speech and Drama. The means and methods of expression used by these arts will be discussed in relation to one another and to the civilizations and cultures of various epochs. The course will be conducted by practitioners in the various fields and the artist's point of view will be stressed. The approach will be comparative rather than chronological. Lectures, discussions, demonstrations, assigned readings and exercises, examinations. No experience in the practice of art is required.

353. **The Problems of Painting*. Spring term. Credit three hours. Prerequisite, Course 300 and 301 or Fine Arts 101 and 102. An analytical study of the formal problems of painting, intended to develop the student's understanding and appreciation of historical and modern art. Comparison of the artistic aims of various epochs and study of the technical problems of design, representation, and color as exemplified

by the work of the artists of those epochs. Lectures, discussions, readings, studio exercises, and examinations.

354. **Methods and Materials of Painting*. Fall term. Credit three hours. Prerequisite, Course 300 and 301 or Fine Arts 101 and 102. Two lectures, one studio period. A study of the effect of the various materials, media, and technics upon styles of painting. Mosaic, egg tempera, fresco, and the various methods of oil painting will be studied. Lectures, discussions, readings, studio exercises, and examinations.

356. **Methods and Materials of Sculpture*. One term. Credit three hours. Prerequisite, Course 330. A course presented from the same point of view as Course 354 but dealing with sculpture. May be taken with Course 326.

370, 371. **Typography*. Throughout the year. Credit two hours a term. A study of the historic development of typographic styles and their contemporary application. The elements of design in printing, type faces, illustration, and processes of graphic reproduction will be considered from the standpoint of the artist and the editor. A non-technical course; no previous training is required. Lectures, readings, exercises, and examinations.

375. **Graphic Arts*. Spring term. Credit three hours. A comparative survey of techniques and styles in woodcut, etching, engraving, lithography, and other graphic media, based upon a study of original examples in the Chapman Print Collection.

398, 399. *Seminar in Painting*. Throughout the year. Either term may be taken separately. Credit as assigned. Open to graduate students and to upperclassmen by permission. A study of modern critical opinions and their relation to problems in the theory of art.

STUDIO COURSES. . . . Students expecting to take six or more hours of studio work will normally register for the first course given below. These courses constitute a series aimed to develop the student's understanding of the principles of pictorial composition and his skill in the use of those principles. Design, color, and representation are studied in their relation to artistic expression through problems executed in pencil, charcoal, watercolor, and oil, using still-life and landscape materials as well as the human figure.

In courses offering a choice of credit hours the credit to be gained must be arranged upon registration, counting one two and one-half hour studio period for each credit hour.

300, 301. **Painting and Composition*. Throughout the year. Credit three hours a term.

302, 303. **Painting and Composition*. Throughout the year. Credit three hours a term. Prerequisite, Course 300 and 301.

304, 305. **Painting and Composition*. Throughout the year. Credit three to five hours a term. Prerequisite, Course 302 and 303.

306, 307. **Painting and Composition*. Throughout the year. Credit three to five hours a term. Prerequisite, Course 304 and 305.

390. *Painting and Composition*. Either term. Credit to be assigned. A course for graduate students majoring in painting.

STUDIO COURSES FOR ARCHITECTS... The following courses correspond roughly to the earlier courses in the sequence given above but are especially arranged to meet the need of students in Architecture and Landscape Architecture. Registration of other students is not ordinarily accepted.

310, 311. *Drawing and Painting*. Throughout the year. Credit three hours a term.

312. *Drawing and Painting*. Either term. Credit three hours. Prerequisite, Course 310 and 311.

313. *Drawing and Painting*. Either term. Credit three hours. Prerequisite, Course 312.

SPECIAL STUDIO COURSES... The following courses constitute a study of drawing and composition with special emphasis on the construction and proportion of the human figure as used in pictorial art. Students in courses 342 and 343 will paint as well as draw.

340, 341. **Figure Construction*. Fall and spring terms. The course may be begun in either term. Credit three hours a term.

342, 343. **Figure Composition*. Fall and spring terms. The course may be begun in either term. Credit three hours a term. Prerequisite, Courses 340 and 341 or equivalent.

STUDIO COURSES IN SCULPTURE... The courses listed below constitute a series in which the problems of sculpture are studied through original exercises in various media. The principles of sculptural organization, as related to the material being presented and the medium being used, will be studied and applied. Figure composition and anatomy, as related to sculptural expression, will be studied through reference to the model. The processes of modeling, casting, carving, and the firing and glazing of pottery will be studied.

330, 331. **Sculpture*. Fall and spring terms. The course may be begun in either term. Credit three hours a term.

332, 333. **Sculpture*. Throughout the year. Credit three to five hours a term. Prerequisite, Course 330 and 331.

334, 335. **Sculpture*. Throughout the year. Credit three to five hours a term. Prerequisite, Course 332 and 333.

396. *Sculpture*. Either term. Credit to be assigned. A course for graduate students majoring in sculpture.

STUDIO COURSES IN TECHNICS...

320. **Graphic Technics*. One term. Credit three hours. May be repeated for credit. Prerequisite, Course 300 and 301. Study and practice of the methods of etching, block printing, lithography, and silk screen printing.

322. **Painting Technics*. One term. Credit three hours. Prerequisite, Course 353 and 300 and 301. Studio work in egg tempera, fresco, and the historical methods of painting in oils.

324, 325. *Applied Design*. Throughout the year. Credit three hours a term. Prerequisite, Course 300 and 301 or 340 and 341. A course primarily intended for students who wish to become teachers of art, but open to others. Fall term: Costume design, textile design, and crafts. Spring term: Interior design, advertising design. Lectures, discussions, readings, and studio exercises.

326, 327, 328. **Sculpture Technics*. Three terms. Credit three hours a term. Terms may be taken separately and in any order. Prerequisite, Course 330 and 356. First Term: Carving. Studio work in carving of wood, stone, and marble. Direct carving method. Use and care of tools. Second Term: Casting and Firing. Waste and piece moulds. Casting in ceramic materials. Glazes. Use of the potter's wheel. Third term: Metal Working. Lost wax and sand casting. Materials, tools, and methods of pouring metals. Beating of metals.

HISTORY OF THE FINE ARTS

The several courses in History offered in the College of Architecture are primarily in the form of lectures. Chronological sequence is followed, with such varying emphasis upon aesthetic, social, political, and economic considerations as may be required.

HISTORY OF ARCHITECTURE AND THE ARTS. . . Courses 404-409 comprise a six-term sequence. They provide a survey of the history of architecture and of the arts of painting and sculpture, considered as social and cultural expressions of western civilization. While the emphasis in each term is on architecture, lectures are also given on parallel developments in painting and sculpture. This sequence forms part of the professional training of students in Architecture.

Lectures on the History of Architecture are given by Mr. DETWEILER and on the History of Painting and Sculpture by Messrs. FINLAYSON and CHISHOLM.

404. *The Ancient World Before Rome*. Fall term. Credit three hours.

405. *The Rise and Fall of the Roman Empire*. Spring term. Credit three hours.

406. *The Middle Ages*. Fall term. Credit three hours.

407. *The Renaissance in Italy and France*. Spring term. Credit three hours.

408. *The Renaissance in England and America*. Spring term. Credit three hours.

409. *Modern Architecture*. Fall term. Credit two hours.

SPECIAL COURSES IN HISTORY...

400, 401. **History of Architecture*. Throughout the year. Credit three hours a term. Open to freshmen by permission of the instructor. A course primarily intended for students in the College of Arts and Sciences, for candidates for the B.F.A. degree, and others interested in a brief survey of the history of architecture and its relationship with parallel social, economic, and political trends. No experience in drawing or knowledge of structural elements is required.

450. **History of Landscape Architecture*. One term. Credit three hours.

470, 471. **Historical Seminar in Architecture*. Throughout the year. Credit two hours a term. Investigation of assigned topics in the history of architecture. Open to graduate students and to upperclassmen by permission.

COURSES IN THE COLLEGE OF ARTS AND SCIENCES... The following courses in the History of Painting and Sculpture are open to students in the College of Architecture. For further information, see the *Announcement of the College of Arts and Sciences*.

Introduction to Art (Fine Arts 101, 102). Throughout the year. Credit three hours a term.

Primitive Art: The Art of Early Societies (Fine Arts 204). Spring term. Credit three hours.

Greek Sculpture (Fine Arts 301). Fall term. Credit three hours.

Art of the Roman Empire (Fine Arts 302). Spring term. Credit three hours.

Romanesque and Gothic Sculpture (Fine Arts 427). Fall term. Credit three hours.

Gothic Painting (Fine Arts 428). Spring term. Credit three hours.

Italian Painting (Fine Arts 505). Fall term. Credit three hours.

Renaissance and Modern Sculpture (Fine Arts 506). Spring term. Credit three hours.

American Painting (Fine Arts 511). Fall term. Credit three hours.

Seventeenth and Eighteenth Century Painting (Fine Arts 525). Fall term. Credit three hours.

Modern Painting (Fine Arts 526). Spring term. Credit three hours.

Introduction to Far Eastern Art (Fine Arts 601, 602). Throughout the year. Credit three hours a term.

Historical Seminar in Painting and Sculpture (Fine Arts 029, 030). Throughout the year. Credit three hours a term.

GRAPHICS

500, 501. *Descriptive Geometry*. Throughout the year. First term, credit four hours; second term, credit three hours. Lectures and drawing. First term, the fundamental problems of the subject, involving points, lines, planes, plane solids, plane and space curves, curved surfaces, tangencies, and intersections. Second term, 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; perspective and various derived techniques for its practical application. MESSRS. BAXTER, BROWN, and CANFIELD.

APPLIED CONSTRUCTION

The following courses are planned to correlate all the previous work of the student. They are based on the concept 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.

Instruction by MESSRS. TILTON, MONTILLON, WELLS, and BROWN.

601, 602. *Building Materials and Construction*. Two terms. Credit three hours a term. Prerequisite, four terms in the College of Architecture or the equivalent. 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.

604. *Working Drawings*. One term. Credit three hours. Prerequisite, Courses 105, 202, and 601. Criticisms by appointment. The course consists of the design of structures, demonstrated by preliminary sketches, small-scale and large-scale working drawings, and structural reports.

605. *Specifications and Mechanical Equipment*. One term. Credit three hours. Prerequisite, Course 604.

621. *Professional Practice*. One term. Credit two hours. 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.

650, 651. **Planting Design*. Two terms a year. Credit two hours a term. Prerequisite, Plant Materials 10 and 13. Open to election by special permission. Lectures, sketching, drafting, and field trips.

660. *Landscape Construction*. One term. Credit three hours. Prerequisite, Mechanics 200 and 201, C.E. 2102, and C.E. 2610. 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. Problems in earth-work, grading, and location plans, sections, profiles, and cross sections, working drawings. Lecture and drawing periods. Hours to be arranged.

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.

Instruction is given by Messrs. MACKESEY, CLARKE, and REPS.

700. **History of City Planning*. Fall term. Credit three hours. Open to graduates and upperclassmen. The history of the planning of communities from ancient times to the present. Lectures, assigned readings, and examinations.

710. **Principles of City and Regional Planning*. Fall term. Credit three hours. Open to graduates and upperclassmen. 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 readings, and examinations.

711. **City Planning Practice*. Spring term. Credit three hours. Prerequisite, Course 710. 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 readings, reports.

713. **Housing*. Fall term. Credit two hours. Registration limited. Prerequisite, Course 710. 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 may take one or more design programs having some phase of housing as the subject. These programs will be substituted for a regular problem in Course 108 or 154 and credit, as earned, will be awarded in those courses.

717. **Zoning Principles and Practice*. Spring term. Credit two hours. Prerequisite, Course 710. Technical and legal aspects of drafting and administering zoning regulations. Open to graduates and upperclassmen in all colleges of the University.

718. *City Planning Design*. Credit as assigned. Limited to graduate students.

719. *City Planning Research*. Credit as assigned. Limited to graduate students.

INDUSTRIAL DESIGN

Instruction in Industrial Design is offered to give the student a general knowledge of the special problems involved in this increasingly important field of endeavor. While an architectural training is generally considered the best background of study for those who wish to specialize in the professional field of industrial design, it is thought desirable to open these courses of study to students in other colleges of the University. The importance of the aesthetic factors in design in commerce and industry has developed to the point where there is need for considering the broad underlying principles involved in shaping the machines and the implements used in our daily lives, that they may be more pleasing in appearance as well as more efficient. Students who desire to obtain a broader training in the field of industrial design may take as electives certain related courses of study in other colleges of the University, in particular in the College of Engineering, those courses of study having to do with materials processing. Special permission may be given to students in Architecture, registered in or who have already passed Course 840, to substitute problems in industrial design for certain architectural problems in Senior or Advanced Architectural Design.

840. **Industrial Design*. One term. Credit two hours. Lectures and discussion. An introduction to the field of industrial design covering

the fundamental principles and trends. Sketches and assigned reading. Open to upperclassmen and graduates in all colleges of the University. Registration limited and by permission.

841. **Industrial Design*. One term. Credit two hours. Prerequisite, Course 840. A continuation of Course 840, with practice in creative design under criticism. One lecture and one laboratory period each week.

MATHEMATICS

The courses under this head are given by the Department of Mathematics in the College of Arts and Sciences.

129. *Solid Geometry*. One term. Credit three hours, except for students offering Solid Geometry for entrance.

131. *College Algebra*. One term. Credit three hours.

133. *Plane Trigonometry*. One term. Credit three hours, except for students offering Trigonometry for entrance.

171, 172. *Analytic Geometry and Calculus*. Throughout the year. Credit three hours a term. Prerequisites, Mathematics 129 and 133 or their equivalent.

ENGLISH

The following course is offered by the Department of English in the College of Arts and Sciences.

111, 112. *Introductory Course in Reading and Writing*. Throughout the year. Credit three hours a term. English 111 is a prerequisite of 112. The aim of this course is to increase the student's ability to communicate his own thought and to understand the thought of others.

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.

10. *Taxonomy of Cultivated Plants*. Fall term. Credit three hours. A study of the kinds of cultivated ferns and seed plants and their classification into genera and families. Emphasis is placed on methods of identification, the preparation and use of analytical keys, the distinguishing characteristics of the families concerned and their importance in ornamental horticulture.

12. *Herbaceous Plant Materials*. Spring term. Credit three hours. Prerequisite, Course 10 or permission to register. A study of the ornamental herbaceous plants used in landscape and garden plantings. Emphasis is placed on the identification, use, and culture of spring-

flowering bulbs and perennials. The class visits Rochester parks and gardens in late May.

13. *Woody-Plant Materials*. Spring term. Credit four hours. Prerequisite, Course 10 or permission to register. A study of the trees, shrubs, and vines used in landscape planting. Emphasis is placed on their characteristics and value for use as landscape material. The class will visit Rochester parks and gardens.

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 or Landscape Architecture.

1226. *Materials Laboratory*. One term. Credit three hours. Prerequisite, Mechanics 201, and must be taken with or preceded by C.E. 2715. 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. Laboratory work, five hours a week.

2101. *Elementary Surveying*. One term as assigned. Credit three hours. Use of steel tape, level, and transit; fundamental surveying methods; measurements 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, *Elementary Surveying*.

2102. *Advanced Surveying*. Credit three hours. Prerequisite, C.E. 2101. City and mine surveying, surveys of the United States public lands; volumetric, topographic, hydrographic, and geodetic surveying; elements of photographic surveying; map projections; elements of practical astronomy. Textbooks: Breed and Hosmer, *Elementary Surveying*, Volume I, and *Higher Surveying*, Volume II. Three recitations a week.

2131. *Elementary Surveying*. Either term. Credit one hour. Use of steel tape, level, and transit. Fundamentals. Textbook: *Surveying*, Breed. One 2½-hour period a week.

2132. *Advanced Surveying*. For students in Landscape Architecture. One term. Credit two hours. Prerequisite, C.E. 2101. Profile leveling; cross-sectioning; earthwork; circular curves and spirals; vertical curves.

Recitations, computations, and field work. Textbook: Breed and Hosmer, Vol. I.

2601. *Route Surveying and Drawing*. One term. Credit three hours. Prerequisite, C.E. 2102. The recitations cover the theory of simple transition, and vertical curves, and earthwork computations, with applications to practical problems for purposes of illustration. The field periods take up about two-thirds of the term and are devoted to computing, laying out, and checking simple, transition, and vertical curves. The drawing periods take up the remaining third of the term. Textbooks: Pickels & Wiles, *Route Surveying*, and Crandall, *Earthwork Tables*. One recitation and two field or drawing periods a week.

2610. *Highway Engineering*. One term. Credit three hours. Prerequisite, C.E. 2601 and C.E. 2725. Design, construction, and maintenance of highways and city streets. Location, alignment, drainage, width, and capacity; soils and soil stabilization; earth, gravel, and macadam roads; city and rural pavements; grade separations; minor structures; construction in swamps; construction methods and equipment; traffic control; planning surveys, economics, financing, and administration. Two recitations and one computing period a week. Textbook: Bruce, *Highway Design and Construction*.

2715. *Concrete Construction*. One term. Credit three hours. Prerequisite, Architecture 203, or C.E. 1136 and 1138. 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, *Design of Concrete Structures*. Six hours a week.

2719. *Reinforced Concrete Building Design*. Open to seniors. One term. Credit three hours. Prerequisite, C.E. 2715. Design of a reinforced concrete flat-slab building and investigation of various other types of floor systems for commercial buildings. Complete detail design for one building, including stairway, elevator shafts, penthouses, etc. Working drawings and steel schedules. Textbook: Urquhart and O'Rourke, *Design of Concrete Structures*. Seven and one-half hours a week.

2720. *Foundations*. Open to juniors and seniors. One term. Credit three hours. Prerequisite, Architecture 203. 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; theory of bearing capacity. Textbook: Jacoby and Davis, *Foundations of Bridges and Buildings*. Recitations, collateral reading in engineering periodicals, and illustrated reports. Three hours a week.

2725. *Soil Mechanics*. One term. Credit three hours. A comprehensive study of the properties of soil, presenting a conception of its behavior as an engineering material. Theory of soil classification, soil structure, pressure distribution, compressibility, cohesion, elasticity, plasticity, and permeability. Laboratory tests for identification of soils; mechanical analysis, determination of water content, specific gravity, density, permeability, etc. Tests for physical properties of soils. Two lectures and one laboratory period a week.

2902. *Engineering Law*. Open to seniors. One term. Credit three hours. An introductory course in the laws of contract, tort, agency, real property, water rights, form of business organization, sales, and negotiable instruments; special emphasis on contract documents required on construction work; collateral topics such as workmen's compensation, mechanics' liens, arbitration, and patent law are also included. Lectures and recitations, three hours a week. Textbook: Tucker, *Contracts in Engineering*.

UNIVERSITY REQUIREMENTS

PHYSICAL EXAMINATION... Every entering student is required to report at Barton Hall 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 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.

MILITARY SCIENCE AND TACTICS...

1. *Elementary Course*. Required. Throughout the year. The complete course covers two years. Three hours a week. Barton Hall.

Basic instruction in Leadership, Rifle Marksmanship, The World Military Situation, Evolution of Warfare, and a study of maps and aerial photographs are offered in this course. Further details may be obtained at Barton Hall.

Required of all able-bodied first-year and second-year men students* who are American citizens and candidates for a baccalaureate degree. The requirements of Military Science and Tactics must be completed within the first two years of residence; otherwise the student will not be permitted to register again in the University without the consent of the Faculty.

2. *Advanced Course*. Elective. Throughout the year. The complete course covers two years. Five hours a week. Barton Hall. Credit three hours a term. A maximum of six hours may be offered as elective credit toward the baccalaureate degree in the College of Architecture.

*Students who have been enrolled in the Armed Services are exempted from the requirements in Military Service.

Students who have completed the Elementary Course are eligible for enrollment. Students who have completed one year of service with the Armed Forces are also eligible. Six months of such service credits the student with one year of the Elementary Course toward advanced ROTC requirements.

Tactics and Technique are taught in four of the arms and services, including Field Artillery, Ordnance, Signal Corps, and Quartermaster Corps; attendance at one summer camp for six or eight weeks is required. Instruction is also provided in such general subjects as Military Problems of the United States; Psychological Warfare; Combined and Joint Operations; Military Leadership, Psychology and Personnel Management; Occupied Territories, Command and Staff Functions, by specialists in these fields, including lecturers from other departments, schools, and colleges of the University. During the course the student receives a substantial government allowance and a regulation officer's uniform. Completion of the Advanced Course qualifies students for commission as Second Lieutenants of the Officers' Reserve Corps, U. S. Army.

PHYSICAL TRAINING FOR MEN... All undergraduate students must complete four terms of work, three hours a week, in Physical Training. The requirement in Physical Training must be completed within the first four terms, and postponements are to be allowed only by consent of the University Faculty Committee on Military Science and Physical Training.

Exemption from this requirement may be made by the University Faculty Committee on Military Science and Physical Training when it is recommended by the Medical Office or when unusual conditions of age, residence, or outside responsibilities require it. Students who have been discharged from the Armed Forces are exempt.

For students entering with advanced standing, the number of terms of Physical Training required is to be reduced by the number of terms which the student satisfactorily completed (whether or not Physical Training was included in his program) in a college of recognized standing.

PHYSICAL TRAINING 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 and modern), golf, games, individual gymnastics, riding, riflery, and swimming.